

Bob Cooper's

JULY 15 2006

SatFACTS

MONTHLY



Reporting on "The World" of satellite television in the Pacific and Asia

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the CDVB9200A**

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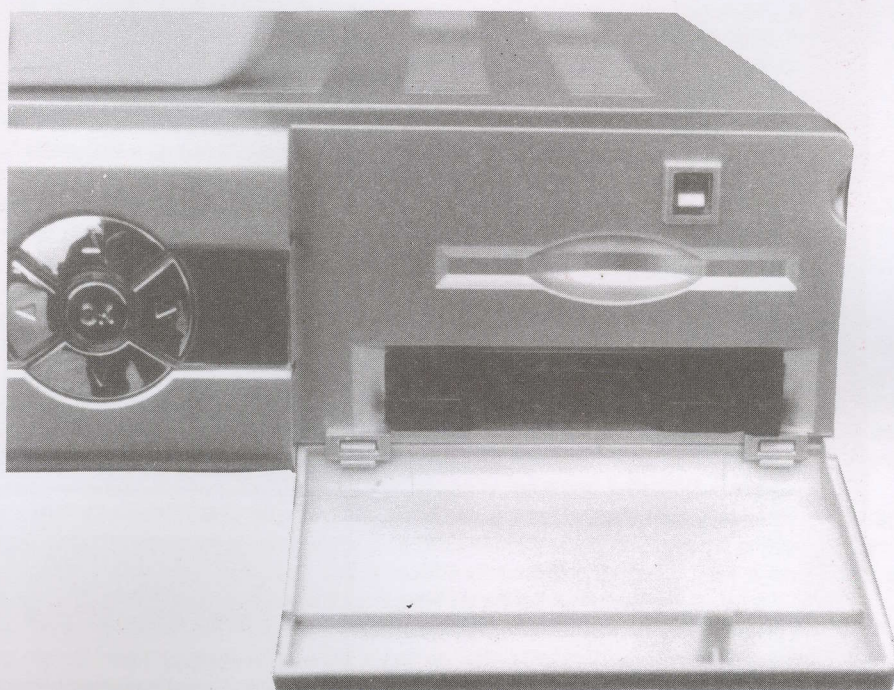
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Vol. 12 ♦ No. 143

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Specials this month

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- 40Gb HDD = 40hr Record time
- 2x CI CAM Slots
- DiSEqC 1.2
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Satlook - Signal Meter



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- A must for the professional
- Simple menus and functions
- Price: Phone up for Quote

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- 4900 Channel Memory
- DiSEqC 1.2
- User Friendly
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Everything? Yeah we got

LNBF

- Zinwell C Band
- Zinwell KU Band
- MTI C Band, Superhigh gain
- One Cable Solution - C-Band
- Dual Output KU 11300 MHz

Positioners

- Superjack EZ-2000
- Superjack DP-6600, DiSEqC 1.0/1.2
- Technosat DP-200, DiSEqC 1.2
- Manual Actuator Driver - EW101
- SAP 2000: 99 Memory positioner

Actuators

- Superjack HARL-3618, 18" Actuator
- Superjack HARL-3624, 24" Actuator
- Superjack DG-120, H/H Mount

Receivers

- SuperNET CA, Irdeto Embedded
- Success, Free-to-Air
- Dion DT-370, Free-to-Air Receiver
- Dion 2x CI, Hardware AllCAMed
- ChangHong, Mediaguard embedded
- SuperNET Terrestrial, DVB-T
- Phoenix High Definition STB

Dish and mounts

- 1.2, 1.8m Solid Prime focus
- 45, 60, 65, 85cm KU dish Offset
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- Duty PSI and JOYSAT Available
- C-Band Wall brackets
- C-Band Concrete mounts and stands
- KU Gutter mounts
- KU Wall mounts
- KU Float mounts
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Dion 818 CI - Digital Satellite Receiver



- Slim Size and User Friendly OSD
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- Hardware AllCAMed

SuperJack H-H Actuator, DiSEqC embedded



- All it takes is one coaxial cable....
- NO MOTOR CABLE REQUIRED**
- DiSEqC Positioner EMBEDDED!

Supernet - Terrestrial DVB-T



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- Easy to install and use

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- FTA + Software Patched
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Switches and Splitters

- 2 and 4 way DiSEqC switches
- 0/22kHz switches
- 2 and 4 way cable splitters
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- 0/12V Switch

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- RG6-U Dual Shield Coaxial Cable
- RG6-U Quad Shield Coaxial Cable
- Cat5 Actuator Cable

Plugs

- F Connectors, Screw or Clamp types
- Cable joiners
- AV Splitters
- Cable Strippers
- Cable clampers
- Various other joiners and accessories
- e.g. RCA/SCART cables and converters

Misc

- 2.4GHz AV Sender
- Irdeto 2.06B CAMs, Viaccess CAMs
- Satlook Digital Signal Meter
- Satlook Analogue Signal Meter
- Satlook Digital + Analogue combo
- Satellite finders
- Angle level measure instrument
- High Quality Compasses



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This publication is dedicated to the premise that as we enter the 21st century, ancient 20th century notions concerning borders and boundaries no longer define a person's horizon. In the air, all around you, are microwave signals carrying messages of entertainment, information and education. These messages are available to anyone willing to install appropriate receiving equipment and, where applicable, pay a monthly or annual fee to receive the content of these messages in the privacy of their own home. Welcome to the 21st century - a world without borders, a world without boundaries.

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our 12th year!

COOP'S COMMENT

Now that the New Zealand government has shown their support for a FTA satellite (and equally, terrestrial) conversion to digital TV, most of us wonder, "when will this happen?" Keep wondering.

After the B1 failure at the end of March, it would be political suicide to announce a conversion that includes satellite - the "stigma" of satellite being not exactly pristine at the moment. Most of us understand and can rationalise the B1 failure but for average folks who only want their footy and "Coronation Street" such failures are beyond comprehension. The reality of analogue to digital conversion has not yet sunk in (spending \$200-\$500 for a FTA system for each and every TV/VCR in the home) and it will not for perhaps a year. In that period of time you can be sure the "government spin doctors" will do everything in their power to "blame" the cost of conversion on the commercial broadcasters, not themselves.

So when will there be "official" recognition of the conversion? At the highest government level, it is already here. But the soak-down effect to the average family with one or three or five TV/VCRs to 'digitise' it is not yet apparent. Even at the TVNZ level, it is non-specific.

And for good reason. Between today and D1's launch, there are months of uncertainty - B1 could re-fail at any second leaving New Zealand without the almighty SKY (NZ) service. And if the only backup is to shut-down B3 at 152E, drift-move it to 160E, and refire it as a temporary substitute, we are facing up to ten days of no SKY TV - no TV at all - for 600,00 or so homes. None of this will paint an encouraging picture for the future of D1's FTA service. The typical Footy + Coronation Street fan cannot be expected to understand a shortage of hydrazine fuel, a satellite (B1) pushed beyond its' normal flight schedule. Moreover, why should they want to understand - when the only thing they can watch is a blue screen advising "a weather outage has occurred."

Until D1 launches, and is successfully deployed to 160E, do not anticipate a positive, "here are the facts" statement from the New Zealand government. To make such a statement before D1 is on station, and functioning, would be risky - very risky, given the history of satellite failures.

About which. One web site suggests October 21 for a D1 launch. Ariane Space recently issued a press statement mentioning "September" but declined to be specific as to a date. But assuming October 21, we are looking at mid-November before D1, if successfully launched, is "on station" and ready to function; at the earliest. In the meantime Australian broadcasters SBS and ABC have abandoned B1 (for NSS-5), not apparently convinced their important feeds will continue to be available on B1 (SatFACTS # 141, p. 27). Other networks have their own contingency plans - a choice not available to NZ's SKY TV which is stuck on B1 whatever may be the future of this badly ailing piece of soon-to-be space trash.

So who is responsible for this situation? SKY NZ is a customer or client of Optus and Optus - Singapore owns the almost-past-replacement-date bird. When B1 went "walk-about" late in March, extra amounts of station-keeping (hydrazine, in the vernacular) fuel was consumed to get it "right" again. Think of coasting down the highway with your tank on empty, the red fuel dash light flashing, and not a petrol station in sight. That is B1 at the moment.

The longer it takes for D1 to magically appear at 160E, the more stressful the situation. It is stressful on Optus, SKY NZ and all of us. Alas, D1's launch requires major retrofitting to an Ariane rocket, check-outs and all of this adds time - time B1 does not give willingly. B1 is functioning on a backup station-keeping computer, is virtually empty of station keeping fuel, and has a thrice-history of abruptly (without warning) taking off on its own. The late in March recapture of a misdirected satellite was something of a miracle - a 10% chance that worked. It is unlikely to repeat and we need to be conscious that B1 could vault for outer space at any time with no warning.

One of the major factors in all of this is the solar "sun spot cycle" which is presently in a stage of major transition. Solar "storms" - bombarding the earth with heavy doses of proton waves that create havoc for geostationary satellites, are possible at anytime. If there was a bad time, an in opportune period, to be low on station keeping fuel - this would be it.

This is not, "the boy cried wolf." This is simply, "the boy cried reality." This is a bad situation, a gigantic "crap shoot" hoping against hope B1 survives until later in 2006. Fingers crossed!



July 15, 2006

In Volume 12 ♦ Number 143

NZ Adopts MPEG-2 + MHEG5 'middle ware' -p. 7; Bonner Martin - MPEG-2 for NZ??? -p. 14; PVR + FTA 2006 'Coship' style -p. 15; FREEVIEW: Who owns it??? -p.20

Departments

Programmer/Programming -p.2; Hardware/Equipment Update -p. 4; SatFACTS Digital Watch -p. 23; Supplemental Data -p. 26; With The Observers -p. 27; C-Band Pioneer Convention -p. 28

-On the cover-

Coship's latest IRD with PVR on board - p. 15

PROGRAMMER
PROGRAMMING
PROMOTION

UPDATE

JULY 15, 2006

MHEG-5 is middleware

"Please note (SF#142) MHEG-5 is NOT a video compression standard and certainly not the next step in video compression after MPEG-4 as SF seems to suggest. MHEG-5 is an API (Application Programming Interface), 'middleware' in the language of the programming trade. It is being used in the UK digital terrestrial broadcasting (DTTB) set top boxes along side MPEG-2 video and audio decoding. It seems odd to me there is a shortage of MHEG-5 capable designs in the marketplace and would have thought that every UK STB would be compliant with this requirement. I understand that NZ's consortium plans to do a self-certification of the STBs 'approved' for sale - and would recommend it would be better if an independent test house did this. There is plenty that can go wrong in either the broadcast stream or in the STB (software) design, especially in a 'horizontal' market!"

Been there, done it, learned!
Australia

There is much confusion concerning MHEG-5 designs available for DVB-S/DTTS (satellite versus DVB-T terrestrial). Several would-like-to-be distributors for NZ tell SatFACTS they cannot locate satellite designs with MHEG-5 included. If this is true, the TVNZ led 'consortium' may have selected an impossible to meet target design - at least at this point in time. We look further into this contentious issue starting on pages 7 and 20 here.

V versus H LNBs

"What is the difference between a V LNB and a H LNB - are they two different beasts? I have just converted a SKY (NZ) dish to motors, it can arc east-west and up and down, using motors from a printer!"

Keith, NZ

Inside the LNB is a tiny probe antenna and whether it is positioned up and down (vertical) or side to side (horizontal) determines the polarisation. Most current LNBs have two probes inside - selecting one (14V) is one polarity, 18V and the second one switches on.

British Freeview has now reached 7.2 million equipped households surpassing a dwindling number who continue to rely upon old-fashioned analogue (now 6.3 million households). BSkyB has stagnated at just over 8 million with every indication Freeview will pass this satellite service before the end of 2006.

VOA to abandon POR September 30. The 3886RHC 1701 service essential to Pacific Ocean reach for the Voice of America is to be terminated. That will leave the limited reach of VOA on AsiaSat 2 as the only choice. Complaints? Try gwilliam@IBB.GOV and pubaff@IBB.GOV.

Minor snafu? Seems someone who registered an important "trade name" (think of FREEVIEW) neglected to complete the registration properly. And the evidence now is "FREEVIEW" cannot be registered as a trade mark at all, by anyone. Kind of a "free-for-all-for-freeview!" Bureaucratic chaos appears to be dogging the New Zealand transition to digital (pages 7, 20).

PRODIG-5 visit. Phil Morris (Gough Technology) dropped into SatFACTS to show-off the new "Television Explorer" meter. This is one heck of an instrument, but the price tag will stop SKY/Austar/Foxtel-only installers in their tracks. We will review it in detail in an early issue; see Electrocraft p. 21 for an advance opportunity to own one.



Australia is awash in high level political intrigue (including Rupert Murdoch inviting the PM to lunch), debating what to do next in the TV world. Broadband Internet has taken off like a wild fire in the Blue Mountains attracting viewers who might otherwise be sending money monthly to Foxtel. Terrestrial digital viewers are growing but at a rate well below what is needed for a full-scale transition to digital. Foxtel + Austar now have service (satellite and cable) in 25% of homes, up a marginal 2% in 12 months. The digital-transition initiative mistake is obvious if not easily repaired: No extra-programming incentive when considering digital and a political scheme that almost guarantees failure of digital. Australian advertisers spend on average 10% of their annual budgets through Internet, whereas in the USA that percentage is 5%. There is a strong message here about the failure of "traditional media" to be responsive to viewer/user needs and interests.

Korea's first-ever mobile digital TV now has 1m terrestrial digital TV receivers watching in just over seven months of operation, although coverage remains Seoul-only. 32% of those watching are using 3G cell fones software for terrestrial digital, the majority are laptop PC USB models that sell for as little as US\$51; MPEG4, 30 fps, 352 x 288 pixel displays.

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Confused by 'Freeview'

"I subscribe to a number of trade pubs including the British 'Television' and have read with keen interest how rapidly (4 years) their free to air digital terrestrial service (Freeview) has gone from no viewers to more than 7 million homes with no indication it will not be a total success with essentially all homes converted. And everything I read amplifies the reasons for their success: (1) Inexpensive price for conversion, (2) a tremendous upgrade in viewing options (from 4 or 5 on analogue to 30+ TV and digital radio as well), (3) a well planned, co-ordinated effort to educate both the public and the installer/service trade on what is essentially brand new technology with a myriad of must-learn techniques, above and beyond those which the best analogue installers claim to know, (4) a massive conversion of existing programming using 4:3 video screens to 16:9 as an incentive to consumers to invest in new DVB-T tuner equipped widescreen TVs. Yes, they have had - continue to have - coverage problems with DVB-T 'multiplexes' and a scarcity of suitable band IV and V transmitting channels is the reason. But as the analogue services are shut down, a new layer of formerly-analogue TV channels will become available as a final phase-in of digital terrestrial cleaning up 'dead zones' and 'black spots.' Now, here in New Zealand, we will be missing the single most important element in mimicking the UK success; the number of programming channels on offer using Freeview. For this to work without further government meddling, TV consumers need that one overpowering reason to spend money on Freeview. As we have learned from observing Australia's attempt to launch a similar service, 'better quality reception' is not sufficient motivation. Why will NZ Freeview only employ a single D1 transponder, self-limited to perhaps 18 programming channels? If we were really serious about making this work, TVNZ/BCL would have a minimum of two transponders planned. Without adequate new programming, this is destined to turn into 'another Australian failure'."

LJ, Auckland

Perhaps the political contributions from pay-TV warped government thinking?

HARDWARE EQUIPMENT PARTS

UPDATE

JULY 15, 2006

Optus D1 and B1 updates. Ariane and several other sources reporting much delayed D1 will launch "sometime in September" as a replacement for malfunctioning B1 (160E). The "blame" for the late launch apparently goes to the satellite manufacturer, Orbital (US). Companion D2, to replace B3 (152E), remains to be launch scheduled "sometime during 2007." B1, meanwhile, has now gone into "*inclined orbit*" which means that it will be allowed to "drift" north and south above the equator in a "figure 8" pattern. This is in response to a critical shortage of satellite-station positioning fuel as B1 approaches its' retire-by date (August). Optus is assuring B1 users they "should not notice the inclined orbit figure 8 'wobble' in either existing or newly installed dishes" but that would be a function of dish size and the original as-installed pointing accuracy of the dish. Larger dishes (1m+) have much tighter "beamwidths" than the home-size 60cm versions and anyone using such a reception antenna can expect to have signal outage periods if the dish was not dead-on the geostationary orbit position when installed. Additionally, with a slightly (to grossly) mis-pointed dish, being off to/ down on "the side" of the antenna's centre beam point, rain fades will be more pronounced when the figure 8 'wobble' is at extremes. D1, if launched "sometime in September," will require 4 to 6 weeks after launch for deployment and check-out. A transition date from B1 to D1? Still too early to forecast but when there is a 'hard launch date' announced, add 4 to 6 weeks to that date as a starting point. And that assumes D1 is successfully launched without flight or deployment problems. Yes, it remains a giant, expensive 'toss of the dice' at this point.

Glutton 4 detail? Try <http://www.dtg.org.uk/reference/mheg5.html> to learn how the original MHEG5 middleware, adopted for terrestrial DTTB in UK, has matured with more advanced enhancements covering non-English language fonts, optional remote keyboard (rather than simplistic RCU), and a "financial transaction toolkit" for home shopping and similar applications. And a word of caution - if planing to import MHEG-5 capable STBs for NZ, make sure the format is correct for TVNZ planned usage of the technology (start with Steve Roberts at TVNZ, 64-9-916 6400). One TVNZ source revealed they will only 'approve' (certify as meeting their requirements) one, at most two, models of satellite and terrestrial STB "*until 2008, at which point we may consider additional models for approval.*" Another TVNZ source believes "*Our group will capture 80% of the market*" (for STBs), an interesting comment from a representative of a state owned business. Not everyone is pleased with this direction, as we reveal on page 20.

SelecTV, planned lower-cost DTH service for Australia, is calling it quits - bidders for business include WIN-TV which believes it could make a go of operation. If WIN deal goes through, SelecTV would be reborn with WIN financing.



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75cm Azure shine offset dish	\$40	MTI C band LNBF	\$25
85cm Azure shine offset dish	\$45	MTI one cable solution LNBF	\$45
One leg gutter mount	\$18	Satellite finder	\$25
Two leg gutter mount	\$22	RG6 stripper	\$20
Tin roof mount	\$22	RG6/RG11 crimper	\$30
Wall mount	\$15	Angle meter	\$35
Superjack H-H motor	\$95	Compass High Quality	\$10
2.3m SD mesh dish	\$130	RG 6 Crimp Connector 100 pack	\$25
3m SD mesh dish	\$340	22K switch	\$10
3m HD mesh dish	\$380	Two way DiSEqC switch	\$10
3" 2.5m galvanised pole	\$30	Four way DiSEqC switch	\$12
3" 3m galvanised pole	\$35	Satellite 2 way splitter	\$1.50
3" 3.5m galvanised pole	\$40	Satellite 3 way splitter	\$2
3" Triangle Pole for C band dish	\$50	Satellite 4 way splitter	\$2.50
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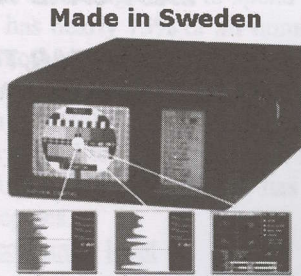


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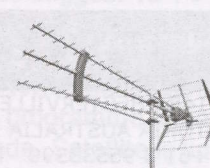
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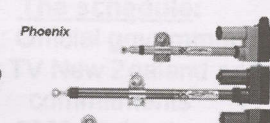
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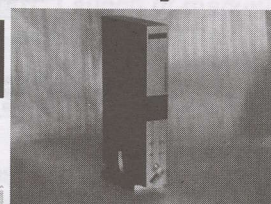
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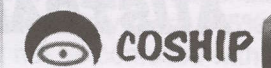
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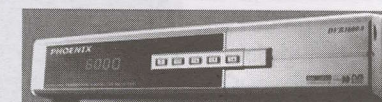
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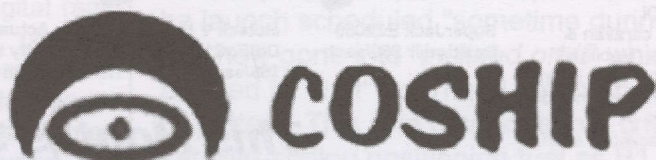
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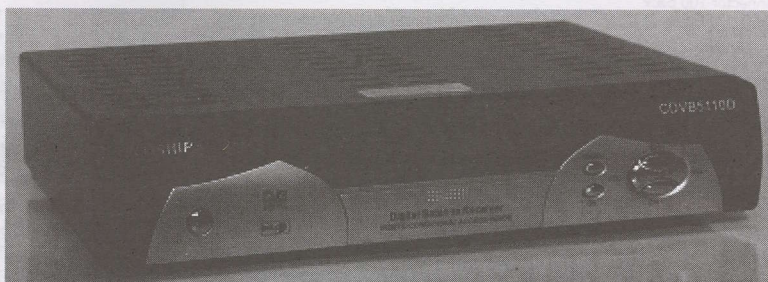
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New Zealand Commits: Digital TV to a schedule!

Getting there has been difficult, shaped by internal government politics, commercial considerations, and a fear of future voter revolt. In the end it came down to that which New Zealand seems to do with extraordinary skill - finding compromises which different factions could accept. Most everyone won something, but had to give up a few demands in the process. New Zealand now has a government mandated plan to discontinue existing analogue TV transmission in favour of a gradual transition to all-digital.

It will be a hybrid service - major population centres will have DVB-T (digital video broadcasting/*terrestrial*) while the entire nation will have DVB-S (digital video *satellite*). The services will not be totally parallel as we will investigate - the terrestrial viewers are likely to end up with greater programme selection/diversity than the satellite folks. At the end of the transition, a date not yet cast in concrete, all existing analogue transmitters will be shut down, dismantled, and on sold to places like Samoa and The Cooks. And at that point, the VHF channels which provide the majority of the coverage for FTA analogue will be taken back by government and auctioned off to whomever is willing to pay the biggest price for megahertz.

There are significant unknowns in all of this making it impossible for iron clad policies to be issued or even hypothecated. And the largest of these is the response of the public, those people who own and operate more than 2 million TV reception devices in the country. The model for all of this, called 'FREEVIEW'(r) after a similar successful transition program in the UK, is operating under significantly different ground rules. The "translation" of the UK-successful Freeview(r) to a consumer acceptable NZ Freeview(r) remains and will remain an unknown for perhaps 18 months.

World-wide, the public has shown an ingrained reluctance to invest in and adopt a digital upgrade simply on the promise of "better *quality* reception." Australia has struggled, continues to fight, a public unmoved by '*crystal clear images*'. The UK recognised this public indifference early on, and adopted a 'more is better' approach - a (much) larger number of channels to select from as encouragement to spend money for a digital STB. The UK has nearly 75% of all homes now connected to one form or another of DVB whereas Australia in approximately the same time frame is barely hovering around 25% (both launching in 2001). And that *includes* the homes who subscribe to pay-satellite digital services. Digital may be the 'wave of the future' but presently, it has barely created a ripple for most adoptees.

The battle ground is at the consumer level

New Zealand's plan is to grant the two primary telecasters (TVNZ and CanWest) access to both satellite and terrestrial 'bandwidth' leaving to the programmers how they utilise this space. There is, as to be expected, infighting at this level - both sides claiming "commercial considerations" for keeping their ultimate programming plans undisclosed. In fact, neither wants to be first to commit because that will leave the

The schedule:

June 15, 2006: Official government statements backed up by TV New Zealand and CanWest commitments

July-December 2006: Yet to be verified date for launch and commissioning of B1 replacement D1
First-half 2007: Construction and commissioning of first ten DVB-T digital sites

First-half 2007: Launch of single D1 transponder carrying 12+ DVB-S programming channels

First-half 2007: Launch of marketing program to place DVB-S and DVB-T STBs and attachments in consumer electronic stores.

First ten terrestrial sites?

BCL is responsible for constructing and turning on UHF band IV/V DVB-T transmitters which backers claim will ultimately reach "75% of the population." This should not be confused with reaching 75% of the land area within New Zealand. The sequence here is not sacred - and position #10 remains open for decision.

- #1/ Waiatarua/Auckland
- #2/ Te Aroha/Hamilton
- #3/ Wharite Manawatu/Palmerston North
- #4/ Mt Kau Kau/ Wellington
- #5/ Sugarloaf/Christchurch
- #6/ Mt Cargill/Dunedin
- #7/ Hedgehope/Invercargill
- #8/ Mt Erin/Nastings
- #9/ Mt Edgmont/ New Plymouth
- #10/ Pine Hill/North Shore Auckland (?)

The programming services available?

Fact: A single D1 transponder, using MPEG-2 compression, is (currently) capable of delivering up to 20 TV channels; fewer if there are also radio services included (there will be).

Fact: A single terrestrial 8MHz bandwidth channel is capable of delivering up to 6 SDTV (standard definition) TV programme channels.

Fiction: Some news stories suggest 18 TV programme channels which would be some combination of satellite and terrestrial 8 MHz channels (1 transponder, or 3 terrestrial channels).

Fiction: There will NOT be 18 programme channels early-on via *either* delivery mode. Satellite is limited by the TVNZ plan to transmit three separate parallel feeds for TVOne and TV2 (equals 6 programme channels); terrestrial will not be so limited and will in fact be capable of more 'different programmes' than satellite. There will be consumer confusion on this important technical point!

other with the power to "snipe" at whatever decisions are announced. In the end, it is and will remain all about 'counting eyeballs' - how many people will select their programming, without respect to how it is delivered into their home. Both broadcasters are spending more and more time looking over their shoulders, not at one another but rather at that growing monster, Internet-delivered-video programming.

The hype and the facts

Television, print and web media coverage largely exaggerate the government decision, citing a \$25 million subsidy "spread over five years" as their major contribution. Nobody has calculated what the transition to digital will cost 2,000,000 TV reception device owners: \$200,000,000 at \$100 per reception device, \$400,000,000 at \$200 per device up to \$1,000,000,000 at \$500 per device. A device? Parlour TV, kitchen/bedroom TV(s), and of course all of those wonderful recording gadgets that are only analogue compatible. Add to these costs the expenditures to convert an estimated 70,000 office/motel/hotel room receivers with either satellite or DVB-T "headends" and the numbers drive the government's \$25,000,000 contribution down into the noise floor. If we take the \$1,000,000,000 number and apply the 12.5% GST factor, government's "investment" of \$25,000,000 creates revenue of \$125,000,000 to tax receipts; not a bad return. And after all is done, government then comes back and sells the abandoned analogue VHF (and UHF) channels to who knows whom - some estimate another \$130,000,000 income for the state. So government is looking at a total return in excess of \$250,000,000 for its \$25,000,000 'subsidy' investment; a very tidy 'bonus' indeed. Of course this is without the income earned over the years by the government transmission holdings company BCL/THL which will profit by selling/leasing new digital equipment on mountain top sites, maintaining those sites, and leasing the space therein to digital broadcasters.

The most erroneous 'hype' involves what viewers can expect. Technically, we have with a single transponder up to 18 TV programming channels to play with. Parallels drawn with the UK FREEVIEW are suggesting that means 18 FTA channels. *Don't count on that*, certainly do not expect that initially, if ever. First we have the problem of TVNZ duplication.

When TVNZ was first established, regional TV broadcast centres were the vogue with fully equipped studios in such places as Auckland, Wellington, Christchurch and Dunedin. TVNZ, as it grew into an advertising entity, began selling commercials to local sponsors - 'local' is the key word. It made no sense for a Christchurch auto dealer to have his commercials seen in Auckland so these regional broadcast centres, during commercial breaks, dropped their local commercials into the transmission in lieu of what would have otherwise come from Auckland (or Wellington). In this way, TVNZ has created a sizeable, even large, following for its local/regional advertising spots.

With a terrestrial DVB-T system, the same policy can be followed - local commercials by regions, dropped in where appropriate and seen only in the designated geographic area. But with satellite we have one beam that reaches the entire country and no logical technical method of dropping out a Christchurch advertiser except in the South Island market. To answer this, TVNZ has been placing three separate programming streams on satellite for some years - one embedded in the SKY service (that is one for TVOne, another

And - another grey area

So there on the roof/eave/side of your home they have anchored a 60/72cm satellite dish. And whether you paid a cut-rate (\$49) installation price or date back to when a Sky satellite 'install' was \$499, who owns the dish? Or LNB. Or mount. Or cabling? We know (and accept) SKY owns the STB. Alas, when SKY collects a STB (and authorisation card) from a disconnecting subscriber, the rest is left behind. Attached to YOUR house.

Who does it belong to? SKY claims it is theirs but shows no interest in collecting it.

Some would argue it has been "abandoned" by the original owner SKY, and as it is attached to YOUR house, it now becomes yours. Others would argue you are entitled to "send SKY a statement" claiming "rent owed" for their equipment attached to YOUR house.

Read carefully the small print on the back of your SKY contract.

Now - can you simply ask SKY to take away their STB, leaving the balance behind, and then connect your own FREEVIEW(r) equipment to SKY's aerial system?

That jury remains out.

for TV2) which carries Auckland/north North Island advertising, and two more carried on B1 transponder 4. Using Sky's software tailored for TVNZ, if you are a SKY subscriber in northland you actually watch TVOne (and TV2) through the B1 SKY transponder 7U. This ensures you receive the appropriate advertising for your region. And if you are in the south of North Island (Wellington region) your Sky decoder is latched onto TVNZ's B1 transponder 4 and a version of the service featuring commercials for that region. And South Island - a third TVOne and TV2 pair of programming channels carrying commercials only for that region.

So today, as it has been for several years, TVOne and TV2 have been FTA through SKY and through TVNZ's B1 transponder 7U. The programming is identical, many of the (national advertising) commercials are identical but each carries local commercials only for a portion of the country.

So add it up - TVOne times 3, TV2 times 3 and you have six programme channels. Out of how many? The maximum number is 18 so now we have 12 left to use. Nobody has bothered to explain that to the press folks writing about the glamour of the new digital revolution. No matter how you use your fingers and toes to count, six of the 18 possible are essentially duplicates of two services which means four of 18 will be consumed, wasted as it were, and not available for "new, additional, *different* programming."

It is a major deception. Eighteen was not all that many to begin with and 14 is even less attractive. But it is a fact. You can anticipate the response when consumers learn this.

So how might 14 be divided? TVNZ and CanWest are not saying - "a matter of commercial sensitivity" - you understand. So anyone who knows is either silent or in fact they don't know - yet.

Some are obvious:

We'll start by marking #13-#18 reserved for TVNZ.

#12 - Maori TV

The Technical Specs mandated by the NZ broadcaster consortium

References: **Digital Television Group:** Digital Terrestrial Reception; requirements for interoperability, Version 4.0 dated 8.9.2004. **MHEG Broadcast Profile ETSI Es 202 184 v.1.1.1.** (Optus) **Specification of IF and control of LNB input to OPTUS requirements.**

1.1/DRAM: 16 MBytes minimum; **1.1/Flash:** 4 MBytes minimum; **1.2/NVM:** 256 KBytes (may be part of 4 MBytes Flash using flash file system); **1.2/CPU power:** 120MIPS minimum.

2/Services summary: The receiver must give access to all NZ free-to-view broadcast digital satellite, radio, and enhanced/interactive television services. This must include the capability to: efficiently handle Digital Text and Enhanced Broadcast elements of all services; present subtitles (where broadcast) if requested by a viewer; handle both widescreen 16:9 and 4:3 picture formats as required by the connected display.

Where possible receivers should be able to present both subtitles and interactive graphics simultaneously. However, not all receivers may be able to do this, the result being that interactive content will not always be available to viewers that wish subtitles to be presented.

Support for Audio Description is optional. If included, function shall be in accordance with D-Book, Section 4.5.

2.1/Time-exclusive services: The receiver shall handle the transition between the active and the inactive states of a time exclusive service in an orderly fashion, presenting clean transitions into and out of video, audio and inter-active content streams without presentation of any content or application not intended for the selected service.

3.1/MPEG2 audio, video: D-Book Sections 2, 3 and 4

3.2/Subtitles: D-Book Section 5

3.3/Display of subtitles during enhanced programming: Where both are components of a service, ability to simultaneously present both Subtitles and interactive application graphics if required by viewer preferences (D-Book sections 17.4 and 15.2).

3.4/Teletext: A receiver shall have the facility to acquire teletext as defined in EN 300 472 ... and reinsert it in the vertical blanking interval (VBI) of the composite video output according to specification ITU-R BT.653-2.

3.5/Audio descriptions: Receivers that are capable of presenting audio description shall provide at least the minimum user controls. (D-Book 4.0 section 4.5)

3.6/Widescreen: D-Book V4 Section 3.4 and Section 24.2.

3.7/Active Format Descriptions: Ability to handle 16:9 widescreen and 4:3 picture format changes as detailed in the 'D' Book including support for correct aspect ratio and Active Format Descriptors (D-Book Section 24)

3.8/14x9 Processing: Receiver shall offer the option of 14x9 (letter box) format when working with the 4x3 displays (D-Book Section 24).

3.9/OSD: Support for 3-graphics layer model (including); Background image plane (24 bit-8:8:8), and, video plane (25 bit-8:8:8:1), and, Graphics plane (16 bit-4:4:4:4).

4.1/Tuner RF: IF and LNB control specifications (OPTUS).

4.2/Tuner IF: 950-2150MHz.

4.3/Tuner input level: -65dBm to -25dBm.

4.4/Tuner LNB current: 300mA minimum capability.

4.5/Signaling: 13/18V and 22 kHz tone switching

4.6/DiSEqC: Support for 1.2 minimum

4.7/Demodulator: DVB-S standard, EN300 241, symbol rate 2 MS/s to 45 MS/s.

5.0/Service information & Selection summary: On installation receivers must offer the viewer all services that may be received. The service being broadcast will change over time. To ensure the viewer is always able to access all services being broadcast, the receiver must detect and reflect to viewer any such changes with minimal viewer involvement.

Editor's note: This is a strong case for a blind-scan receiver, or, some as of yet not created software display that advises viewers when new services have been added to the bouquet requiring rescanning.

5.1/Scanning for services: When first installed and (where relevant) under viewer instruction, the receiver shall search for the home transponder and detect the presence of all receivable services based upon NIT data (all frequencies).

Editor's note: This suggests the transponder number and parameters arrive at the viewer's site preloaded.

5.2/Logical channel numbers: Ability to locate, store and handle services with logical channel numbers (LCNs) with the ranges of 1 to 799.

Editor's note: This of course suggests that future growth may well add transponders and programme channels beyond the initial 18+.

5.3/Identification of service changes: Automatic identification / storage of services or service changes, without the need for user intervention, by reference to the NIT and/or SDT within 24 hours in the presence of the correct NIT signalling. Should preferably be without disturbance to the viewer.

Editor's note: Another interesting variation - when a channel changes parameters or a new channel appears, the receiver should advise the viewer of a need to "rescan."

5.4/ Selection via service list: The initial displayed service list following a full NIT scan must present services in ascending order of LCN.

(continues page 10)

New Zealand DVB-S technical standards for set-top boxes (continued):

5.5/Favourites: The viewer may re-order and/or filter the presentation of services in services list. New services should not disturb existing viewer favourites.

5.6/Selection via numeric entry: Service selection via numeric entry shall always select a service with a corresponding LCN regardless of any viewer favourites.

5.7/Hidden services: Services identified as "hidden" shall not appear in the service list presented to the viewer. In addition, such services may also be identified as not selectable by numeric entry. (D-Book Section 8)

Editor's note: Perhaps DVB2000 or similar software search routines will in fact identify the 'hidden services' and with correct PID entry make them available.

5.8/ESG "Now/Next": "Now/Next" screen guide using information derived from DVB SI EIT p/f tables.

5.9/EPG: Under control of API using information derived from DVB SI ETI p/f tables.

6.1/Set-up - Easy to use and simple documentation: Receivers shall be simple to set up and/or operate and be provided with clear easy to understand user documentation in line with that requirement. (D-Book Section 26)

6.2/Support Package: The following peripheral items should be included within a baseline receiver package: (1) An RF flylead (1m minimum length, set-top box only); (2) RCA cable(s) (1m minimum length, set-top box only); (3) SCART cable (1m minimum length, secure fixing type, fully connected; internal screening on appropriate connections. EN 50049, set-top box only); (4) Remote control and batteries; (5) User Manual.

Editor's note: The 1m (+) SCART lead will be an innovation for FTA receivers shipped into New Zealand.

6.3/Display of signal quality: To include the ability to display the signal quality of a user-connected channel.

Editor's note: This is 'quality' and not also 'signal level.'

7.1/Outputs - Primary: RCA phono (providing) Component Y, U, V or RGB (switchable)

7.2/Outputs - Secondary: TV SCART with composite and RGB; SCART shall provide widescreen switching on pin 8.

7.3/Outputs - Phono Audio: Audio left and right.

7.4/Outputs - Dolby Digital: SPDIF for pass through of Dolby Digital (AC-3).

7.5/Outputs - UHF modulator: Tuneable to (NZ) UHF channels 21 to 69.

7.6/Outputs - IF loop-through: Satellite IF loop through

7.7/Outputs - Remote control: Remote control conformant with D-Book Section 25, highly recommended.

#11 - TV3 (which does *not* do regional breakout advertising)

#10 - CanWest's C4 (not actually confirmed but logical)

9- There is speculation that TAB with its horse racing might be available on satellite here

The division of the remaining 8 becomes the battleground. And if "more TV," free to air, is what it will take to entice Kiwis into spending money for DVB-S - well, content is critical.

Note here that by eliminating (as unnecessary) the extra-two TVOne and TV2 channels that appear on satellite, the terrestrial service adds four possible channels for additional programming; food for future consideration.

Which brings us back to "commercial sensitivity" and the reality that New Zealand is a small country and the dollar resources for programming, subject to advertising support, are minimal. So the pundits are loose, hypothecating, guessing, attempting to plant their own whims into the mindset at both TVNZ and CanWest.

CanWest may have much more to say about the way the "last 8 unspecified (satellite) channels" are used than is generally recognised. If we were to believe that TVNZ insisted on getting 6 satellite programme channels to support their (unique) approach to regional advertisers only after agreeing at the boardroom level to granting CanWest an equivalent number of 'primary channels' (6), then we have a new equation. Out of 18, TVNZ takes 6 and CanWest takes 6. Now add in Maori TV and TAB and set aside the possibility of one for Prime and we have only 3 unspoken for. With 6 to play with, TV3 and C4 shoe-ins, that grants CanWest 4 *additional* out of the 6 primary to innovate. If CanWest was really clever, and TVNZ lumbered with 4 duplicates out of 6,

satellite could become a 'CanWest preserve' for new programming.

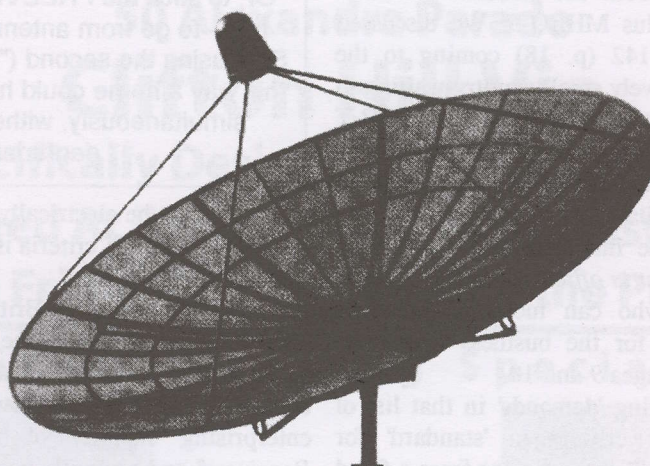
There is one (other) possibility nobody openly discusses; yet. The 'sale' (rental, actually) of some of these 8 remaining to non-Kiwi broadcasters. Such as CCTV or DW. This would create a minor amount of income for the transponder rental and allow the initial offering to be 'fat' if not luxuriate in content.

But if the Kiwi public is to respond enthusiastically, standing in line at Bond and Bond to purchase, Chinese and German programming is a pretty dangerous filler - likely to create a barrier which could haunt the project for months or years. You can almost forecast the 'letters to the editor' if Kiwis spent money for a STB system and then discovered Chinese and German TV as 'filler material'!

No doubt there will be additional Kiwi-created programming in the 'remaining 8' and your guess is as good as any one else's.

Rumours suggest a number of possibilities but don't expect miracles. (1) An all-news channel created by TVNZ, (2) a children's channel (might come from TV2 or TV3 or both actually working together), (3) a time shifted version of any or all three of the major players - TVOne, TV2 or TV3. Time shifting? Say running 7PM at 9PM, or running all of the Monday midnight to midnight on Tuesday midnight to midnight (24 hours delayed from original broadcast). (4) A TVNZ archival channel from the tens of thousands of hours locked away in the TVNZ vaults. (5) A 'yesteryear *sports*' channel, again from the vaults of TVNZ. (6) A CanWest corporate channel - they operate a host of stations around the world (Australia, Canada, Ireland, Africa) and have world programming archives comparable if not greater than TVNZ

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The hardware world

At the risk of sounding very disagreeable, less than positive, we'll now descend to the hardware challenges. There are some.

TVNZ's engineering department has been keen to elevate New Zealand's run at digital from the standard MPEG-2 technical format to MPEG-4 plus MHEG-5. We discussed this at length in SatFACTS #142 (p. 18) coming to the reasoned conclusion that a relatively small country waiting to absorb at most a couple of million DVB-S and DVB-T devices cannot put much pressure on point-of-origin suppliers to satisfy our demands. In other words, we are forced to utilise the formats currently available *in quantity* and to that point, TVNZ has now done the intelligent thing: Initially everything will be MPEG-2. *That is official.* And that means virtually any STB suppliers who can meet the standard MPEG-2 criteria can compete for the business here. The criteria? See full disclosure on page 9 and 10.

Alas, there are some interesting 'demands' in that list of criteria. First, the purpose of criteria (a 'standard' for receivers to be sold in NZ). TVNZ in particular fears a flood of cheap, stripped down STBs - the kind that retail for \$100 or even less, primarily because there remains at Television New Zealand a cadre of folks who are firmly committed to MHEG-5 Teletext and "interactivity" - whatever that may ultimately mean. Turn back to page 9 and note the "2" and "3" series of requirements, in particular 3.3, 3.4 plus 5.3. Simultaneous display of subtitles and access to interactive graphics is leading edge stuff as is "automatic identification / storage of service changes." When you or I learn (from apsattv, Lyngsat or wherever) of a new channel within a previously loaded transponder/bouquet, we typically must erase the old data, rescanning for the replacement updated data containing the new service(s). TVNZ wants the STB to somehow identify any such additions or changes "*without viewer intervention*;" not impossible but not exactly mainstream either.

The (TVNZ) goal is to make digital reception as user-easy as possible, eliminating the need for complete reprogramming or calls to technicians to do it. A nice, logical desire, but perhaps not practical initially.

TVNZ plans, with CanWest, to 'certify' receivers offered for sale and undoubtedly the massive advertising and printed literature will 'warn' buyers to not accept a non-certified STB product. They do not intend to be in the import/distribution business; they do plan to control ("80%") of the market by discouraging cheap receivers that don't comply with their (pages 9 and 10) 'shopping list.' And their reasons are self-serving if sound: the 'future' of digital, as they plan it in text and interactive areas, will demand receivers with base-line MHEG-5 skills. Anything less will leave them unable to explore new (interactive) services in the future.

So can you import receivers and sell them without their certification? Yes. Can you flog off these receivers to customers at lower-than pricing? Probably. Could you be held responsible when at some future date the users discover their receivers do not meet the TVNZ base-line recommendations? Only if you misrepresent the capabilities of your imported box - be careful of what you promise and remember all imported

For homes that aspire to "both"

The standard SKY STB has one L-band antenna input which connects the antenna + LNB to the receiver.

However, the proposed criteria for FREEVIEW(r) STBs specifies this standard antenna connection plus a second one - allowing you to "stack up" two (or more) STBs to a common antenna.

Or, to stick the FREEVIEW(r) box *in front of* a SKY box - to go from antenna/LNB to FREEVIEW(r) to SKY using the second ("loop through") connection. In this way a home could have both packages available simultaneously, without a separate antenna or degradation to either.

products must be electrically certified to be sold - a matter of safety, not a TVNZ criteria issue.

The matter of a "name"

"Freeview" began as a British name, duly registered, wholly owned and controlled by the BBC. The use of the same name in New Zealand was a matter of registration as well - on behalf of TVNZ. There have been problems, already. One enterprising supplier of receivers advertised "*Freeview Receivers*" and promptly heard from TVNZ; the message was "*cease and desist.*"

You are not allowed to use the registered name of anyone unless you indicate its ownership status. Coke without Coke(r) or some similar "trademarked" or "copyrighted" indication is technically a violation of the registration.

There might be variations; take "Free2view" for example - kind of says the same thing, right? Someone beat you to that one (Altsix Technology Ltd in registration of a domain name using that phrase; June 17). Could you vary one of these names (such as "Free-2-View") and get your own registration rights? Try it and see. Oh yes, a domain name registration is *not* the same as a registered trademark. The world can be a complex place.

The name, of course, will say it all - and have a significant impact on the consumer acceptance of any product brought to market. Oh yes - TVNZ appears to have allowed their early registration of 'Freeview' as a trademark to *lapse* back in 2005!

The status of regional TV services

On the outskirts of TVNZ and CanWest, we have Prime (now owned by SKY Network), TAB (likely to be a part of the DVB-T and DVB-S scenario), Auckland/Wellington's Triangle Television and a handful of others scattered throughout the country.

Officially, any of these (or others not in operation) can join the FREEVIEW(r) service package. All it takes is money - a willingness (and ability) to meet the monthly costs of a shared transponder or shared UHF channel bouquet. If you have or could raise a few million, you too could be on satellite and/or optionally available through selected terrestrial digital transmitters.

The logical direction for any of these is to "buy space" on one or more regional broadcast packages such as - Waitarua + North Shore transmitters, an example for Triangle Auckland. In the future, subject to channel space availability and investment capital, Triangle could expand to the Hamilton or other North Island (terrestrial) sites. Prime, a division of SKY, is not expected to *initially* be available on satellite FREEVIEW(r) although it will adopt the terrestrial format.

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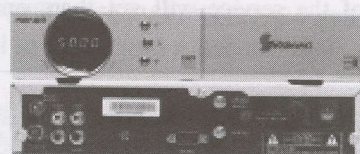
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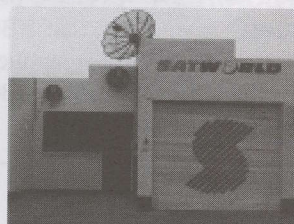
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The regionals are not shut out, nor are they going to get a 'free ride' on FREEVIEW(r). If they wish to compete, it will cost money and there are unlikely to be government subsidies.

The quick turn about

For several years, SKY Network has offered a "free to air" package plan consisting of TVOne, TV2, TV3, C4, TAB, Prime and some radio for a (current) monthly charge just over \$18. They call this the "broadcast package" and promote it as an "account activation saver" when subscribers are out of town/the country for months (in other words, a better choice in their mind than you asking for a disconnect when the service is not in use). Some sources claim there are 18,000 such accounts at Sky - that could be an average with people going on and off, it could be a total guess.

Some percentage of these have the "broadcast package" because that is all they want (or can afford). This group, whether 1,800 or 18,000, are likely to be early adopters of the FREEVIEW(r) satellite service - saving nearly \$220 in one year. They already have (if not own) a dish + LNB + coaxial line, and with the launch of FREEVIEW(r) a replacement STB capable of the service will get them out of the SKY billing routine. Almost.

SKY, being the new owner of Prime, can remind people that (until perhaps 2010) "there is no Prime" on Freeview (satellite). A not so gentle reminder that Freeview(r) is not "complete" without their channel; abandoning SKY's "broadcast package" is to take a viewing step in reverse. Sky's influence is there, even when they are not.

Timing

The clock to activate digital television in New Zealand has been wound. Alas, like setting the timer on your oven stove, someone must push "start" before the clock initiates the "count down." The major item here is the launch and successful positioning and checkout of D1, for which there is only vague hopes for September-October. TVNZ has a push cart, along with CanWest, but neither have any produce to sell. If D1 delays far enough, the boys and girls at BCL might even get a number of the DVB-T transmitters functioning before the "S" element is operating.

In that interim, possibly as long as six months, the players will continue their games to negotiate programming rights, hardware rights, and advertising promotion programs. We are not there - yet - but at least we have a "there" for the first time.

Op-Ed piece:

Bonner Martin Questions why FREEVIEW_(tm) will be MPEG-2

I found the article "Where oh where is this headed" (*) interesting but it did not tell the full story. One is left pondering what the problem is with BSkyB MPEG-4 HDTV service. Is there a fault with the MPEG-4, does it work correctly? No, that is not the problem - BSkyB's problem with initiating HDTV in MPEG-4 comes down to the inability of the receiver suppliers to deliver STBs. (see <http://news.bbc.co.uk/2/hi/entertainment/5003728.stn>)

MPEG-4 is very much alive all over the world with many satellite TV services either using it or about to change over. All over Europe a web search quickly advises where it is being used. In North America, the two very large home dish services (DirecTV and DISH) are in the process of changing over (www.ce.org/Press/CEA_Pubs/906.asp). In the UK, the BBC is being tested in HD by BSkyB in MPEG-4. The BBC is also using MPEG-4 on satellite Astra 2D and the BBC expects to be fully HDTV by 2010, satellite and terrestrial, MPEG-4.

A BBC page advises: "If you want to watch BBC HD you will need a suitable independent HD satellite receiver box. It must support DVB-S2 and MPEG-4/H.264 AVC. A Sky receiver can also be used." The BBC have stated that BBC HD should be 'Free to Air' following the same policy applied to existing channels. HD receivers that should work for BBC HD in the FTA format include the Humax HDC12000."

The BBC began their Astra 2D transmissions May 11 (with a symbol rate of 22.0, FEC 5/6) using the DVB-S standard. At some future point the DVB-S2 standard will be used. Meanwhile BBC terrestrial transmissions (from London only, initially) use MPEG-4, 8K carriers, 64QAM modulation although other parameters are to be tested.

I personally believe the (NZ) FREEVIEW(r) consortium is very wrong in adopting MPEG-2 initially, and also by not advising the industry that at some future date MPEG-2 is likely to rollover in favour of MPEG-4. Many importers and satellite installers hold stocks of MPEG-2 equipment that would become near-worthless if FREEVIEW(r) appeared initially as MPEG-4. I understand their press releases but coincidentally my own contacts at TVNZ, reliable and knowledgeable responsible people, admit to me, "*We are not certain as of today (June 16) which standard will actually be used.*" My concern is that in the sea of uncertainty, those planning to sell FREEVIEW(r) are relying on the published data and believe MPEG-2 is the standard to be followed. And, placing orders for equipment with overseas suppliers accordingly.

I certainly appreciate that if we began with MPEG-4 there could, most probably would, be delivery problems initially of "4" series chipped receivers; but that will quite quickly resolve itself.

If this is a race between the established MPEG-2, MPEG-4 with its HDTV capability, each with MPEG-5 'middleware' as SatFACTS reports, I believe MPEG-4 should be classified as "way out in front." And I am in favour of a slower start, but a correct one.

* SF#142, p. 18. Bonner Martin is a television technologist with an intense interest in the eventual availability in NZ of HDTV.
bonnertmartin@entersurf.co.nz.

This one is a pack-leader

After years of trying and controversy, Coship now has it right

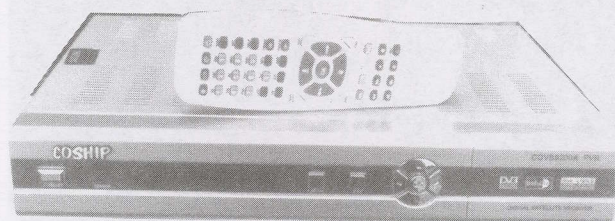
Coship. Remember them? They brought out a blind scan receiver (SF#107) which quickly became controversial, especially in the USA where some sort of disagreement erupted between the original importer (DMS International) and the Chinese company. Nothing good came out of that save the passage of time.

Coship has endured, worked diligently on improving their product, and once again is back - this time with what must be considered the near-ultimate solution to most every enthusiast's dream machine. The electrical specifications appear here (page 18).

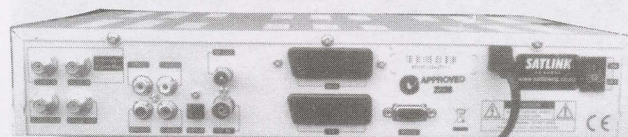
Coship is a Chinese firm with a strong urgency to "catch-up" and then "surpass" the best designs of the competition. For however long it takes the "other guys" to catch up, they have accomplished this with the current series of receivers; 3 in all. There is a low-cost FTA only version, a middle-cost FTA + CI version (which we have not seen and to the best of our knowledge is not currently distributed in the Pacific), and, their top-dog unit - which we review here.

FTA + CI (conditional access with appropriate card, CAM) using one or two (your choice) external CAMs is inbuilt. The CI formats possible include Conax, Cryptoworks, Irdeto, Nagravision, Seca and Viaccess. We tested Irdeto. No, NDS is not an option - the Murdoch folks do not authorise their CA format to be in-built into receivers save when those receivers are intended for an NDS programmer to use.

There are two tuners in-built, allowing you to do a FTA and CA simultaneously, or FTA x 2 or CA x 2 (with appropriate card/CAMs). You can, with the PVR, simply record the program (the usual menu functions allow selection of which channel and when), or tell the PVR you wish to "time shift" say 7PM on WIN to 9 PM playback (you can select any auto-playback point up to 12 hours in advance). In the

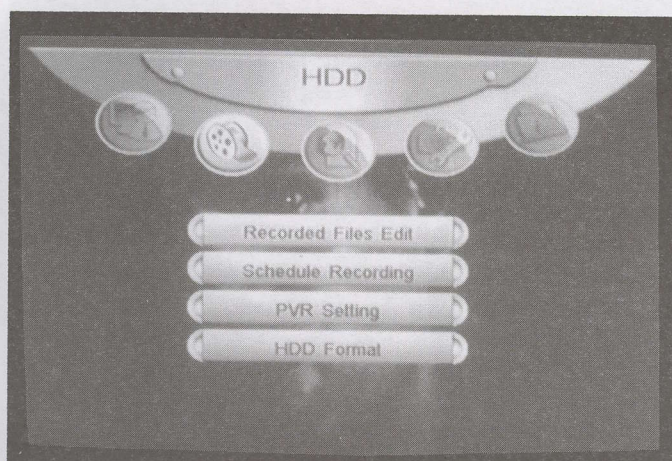
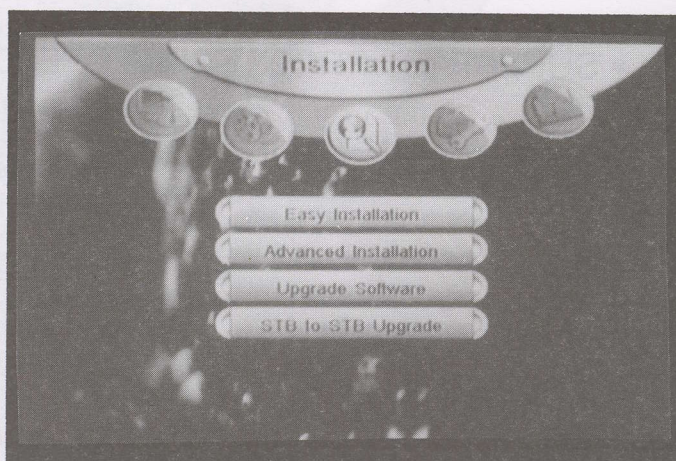


Coship CDVB9200A is top of the line STB with dual CI slots + embedded, 2-12 hour time-shift + 125 hour PVR, PIP, Auto PAL-NTSC, 64 satellite x 5000 channel memory and much more. Point and shoot.



loading menus, you have the usual options of FTA only, FTA + CA, with and without radio. The blindscan feature is quite flawless and amazingly rapid. In this way you can be day-current with the latest transponder content listings as often as you wish to perform that function - which beats the days delayed Lyngsat listings. The speed of the blind scan is measured in minutes per satellite now - a vast improvement from the very first blind-scanners we tested (SF#78, #79) with up to ten hours to complete a satellite and in the process producing plenty of repeat listings. The Coship is not totally free of repeats but it comes close. And if you are a purist and want every satellite listing to be pristine, the edit-out function allows you to toss any you don't want (or believe).

Master files (1 each for STB and PVR functions) get you to the detailed set-up instructions for each function. The point and shoot RCU selects where you wish to go and allows the menu on the screen to be your step by step guide to both installation and operating parameters. A "Help" function within a menu selection gives you on screen directions/assistance.



RECEIVERS

LNB'S

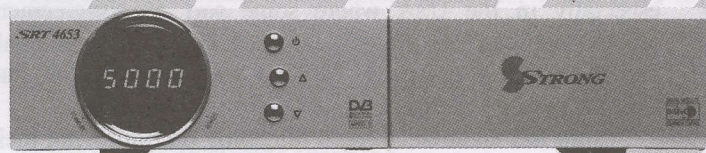
DISHES

POSITIONERS

ACTUATORS

SWITCHES

**Robust Digital
Receiving
For Australia**



NEW

SRT 4651 SRT 4653

SRT 4658

RANGE FOR SATELLITE

&

SRT 5060 SRT 5066

RANGE FOR TERRESTRIAL

- POWERFUL FEATURES & PERFORMANCE
- COMPONENT VIDEO OUTPUTS
- HIGHLY SENSITIVE TUNER
- SUPERFAST PROCESSING SPEED
- FTA / CI / CONAX CAS7



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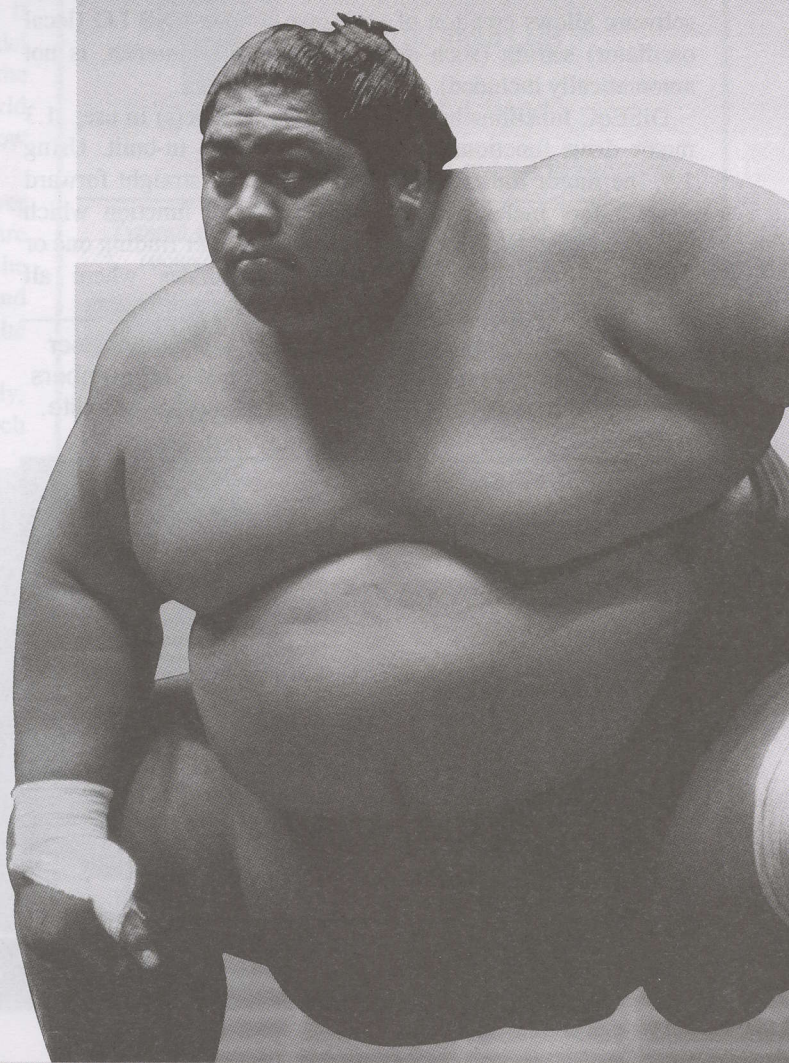
Fax: (+61 3) 8795 7991

Email: asales@strong-technologies.com

For additional information about us
and about our satellite and terrestrial
receivers, visit our website at:
www.strong-technologies.com

For technical matters, please write to:
tech2@strong-technologies.com
or call 1800 820 030

VG Technologies





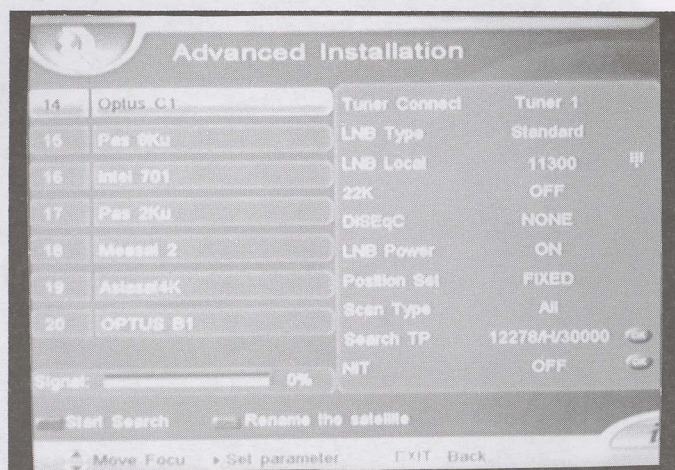
"Easy installation" relies upon the factory loaded satellite and transponder parameters, useful but not nearly as elegant as asking the receiver to do a complete 'blind search' for all services on a particular satellite.

What makes this receiver pretty much in a class by itself is that it works as you would hope a do-it-all product would and should work. We found, with the CAM supplied by the distributor, it does some "all pass" things with a number of Australian based channels which nominally require a smart card - for what that may be worth to you.

The receiver will support a single dish + LNB, single dish + dual LNB, 2 separate dishes, or two dishes with dual LNBs (DiSEqC or 22 kHz tone burst switching external). LNB support includes Universal 1 (9750, 10600), Universal 2 (9750, 10750), Single C-band (5150) or dual (5150, 5750 - the latter for India's unique C-band use). Additionally, software allows creation of your own unique LNB LO (local oscillator) setting (such as 11300, which of interest, is not automatically included).

DiSEqC functions based upon the LNB type(s) in use; 1.3 motor drive functions (and USALS) is also in-built. Using 1.3, the motor limits are set and a series of straight forward steps follow including a "nudge east/west" function which allows the dish to be rotated mechanically after finding one or more satellites, and the system recalculates where all

"Advanced installation" hands to the installer or user the ability to enter virtually any set of relevant numbers to create a receiver search pattern fitting the satellite.



Specifications: CDVB9200A

General: A twin-tuner PVR equipped STB, twin CI slots for card or CAM, DVB/MPEG compliant multi-functions, EPG, auto PAL to NTSC conversion, twin LNB input with loop-through, 64 satellite and 5,000 programme channel memory PIP/PIG (picture in graphic), favourite channel list + channel editing, blind scan or satellite/network/TP scan.

Tuner/LNB: L band twin 950-2150 MHz

Tuner connections: F x 2 input + loop out x 2

Input level range: -65 to -25dBm

External powering: 13/18V DC, 500 mA max

DiSEqC control: 1.3 compatible

Band Switching: 22 kHz tone

System rate: 2-45 Msps (SCPC, MCPC)

Decoding rate: FEC 1/2, 2/3, 3/4, 5/6 and 7/8

MPEG transport: ISO/IEC 13818-1

Input stream: 90 Mbit/s maximum

Aspect ratio select: 4:3 or 16:9

Video resolution: 720 x 576 (pixels)

Audio decoding: MPEG layers I and II

Audio mode: Single/dual channel, stereo, joint stereo

Microprocessor: EMMA2

CPU clock: 200 MIPS

Flash Memory: 4 Mbyte

SDRAM: 32 Mbyte

RF remodulator: PAL DK/BG/I/M

Modulator frequency range: 470 MHz to 860 MHz

Front Panel: 4 digit LED, 8 keys

Remote control: Infra-red (@ 38 kHz)

Rear/TV Scart: RGB, CVBS, Audio L/R

Rear/VCR Scart: CVBS, Audio L/R

Rear/phono: Video, Audio L, Audio R

Rear/Digital Audio Out: S/P DIF or AC-3 (optical)

Rear/RS232: 9 pin D-sub

HDD Options: From 20GB to 160GB (options)

HDD interface: USB ports

Powering/Input range: AC 90-260 V

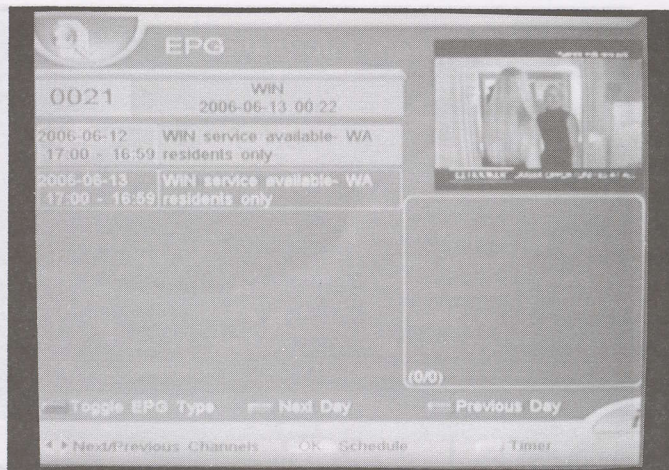
Power Consumption: 55 watts (with HDD)

Sleep/Standby mode consumption: 5 watts maximum

Dealer price range: NZ\$500 with 160GB HD

Source: This is complex. Coship has recently divided into two separate (Chinese) firms: **Coship** (the original) and **Kaivy**. The first continues to do CA/CI version boxes while the second produces only the FTA versions. In New Zealand, www.satlinkz.co.nz (027 493 7025) handles both versions. In Australia,

Phoenix Technology Group also handles both the Coship and newly named Kaivy labelled STBs. Additionally, the Phoenix brand sold by the Phoenix Technology Group is also Coship/Kaivy rebadged in the name of the Australian firm (tel 61-3-9553 3399; www.phoenixtelevision.com.au, Email sales@phoenixsatellite.com.au).



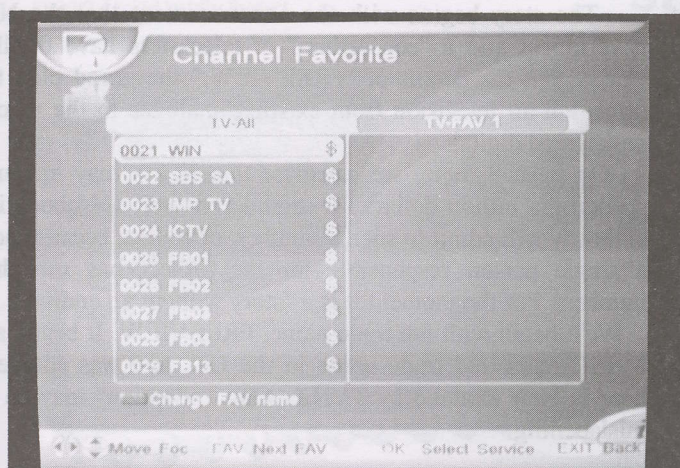
satellites are now located ("moved" as a function of the nudging). A further menu calculation allows inputting of your longitude and latitude which creates a dish position memory for future reference.

Scanning is chosen based upon what you want placed in memory: All services (radio and TV, including CA), FTA only, radio only or TV only. Individual transponder search can be done, along with the full satellite. PID numbers can also be entered when the data stream fails to provide that information. All software is upgradeable from another STB (RS232 connection), or directly from a service. If the signal level and quality meters register properly, pushing 'PID Upgrade' rescans that service and locating new PID numbers replaces the old ones. Oh yes, like most products these days, the default password (resettable) for the various protected functions is "0000."

The video quality is especially sharp - evidence that as the demodulator and processing worlds have matured, software implementation has gradually improved a step at a time. If you compare the image quality against an earlier model Coship, or virtually anything else in the 2003 era, the improvement is quite dramatic - of importance in a world where larger and larger plasma and LCD screens have now become commonplace.

But it is the menu and operating system where this receiver excels. No doubt there are others yet to be tested which are comparable but as the photos attempt to show here, the options available allow a variety of picture in picture and picture in graphic combinations as you wander through the orbit belt or the transponders on a particular bird.

The PIP allows you to watch two channels simultaneously, watch a previously recorded and live simultaneously, watch



S-BAND LNB for terrestrial reception

once again in stock -
immediate shipment
while the supply lasts!

If you missed out - order promptly
to avoid disappointment.

These work exactly like C-band LNBs with the
following changes:

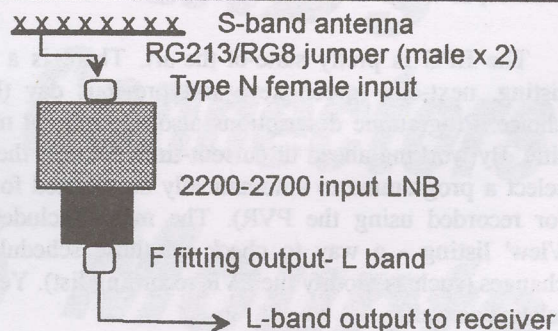
LO is 3650 MHz

Input design range is 2300 - 2700 MHz

Input fitting is type 'N' female to mate with typical
S-band type 'N' female antenna fitting

(Output fitting is type F [female] for RG6
connection to your L-band receiver)

(S-band terrestrial 2400-2484.5 falls into your
L-band analogue [or digital] receiver from 1250 to
1333.5 MHz)



Typical parameters at 14V DC powered from L-band
receiver: 50 dB gain, 0.4 dB noise figure (28K).

2.4/50 Range Extenders

- ☐ Ship 2.4/50 range extender shipping prepaid
US\$114/NZ\$180/A\$152
- ☐ Ship 2.4/50 range extender PLUS 9 element 2.4
GHz high gain directional yagi shipping prepaid
US\$314/NZ\$496/A\$420

Name _____

Company _____

Mailing address _____

Town/city _____ Prov _____

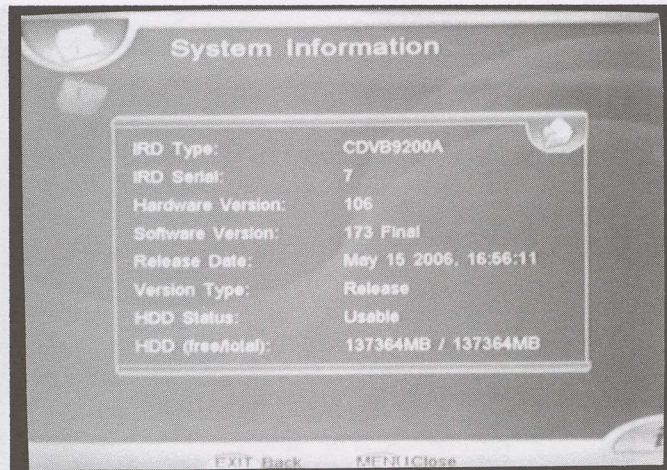
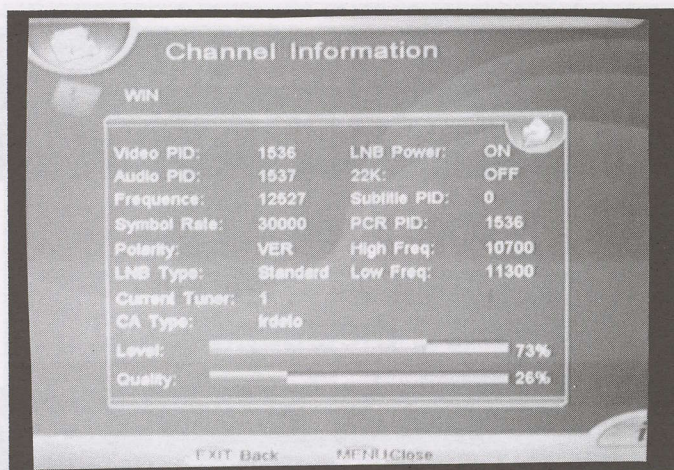
Country _____ Mail code _____

Visa/Mc _____

Expires ____/____/____

Name on card _____

Available exclusively from: Far North Cable TV Ltd, PO
Box 330, Mangonui, Far North, NZ (tel ++64 9 406 0651;
fax ++64 9 406 1083; Email skyking@clear.net.nz)



Channel information (left) and "system information" provide user-settable parameters.

live while checking on the status of a recording underway. The PVR contents can be programmed for "cascade playing" (a sequence you establish with the menu and remote, skipping around on the PVR as you direct), while forward and reverse playbacks can be varied between 12 times full speed down to 1/12th slow in 9 steps. If you wish for some reason, tell the machine to "repeat PVR playback" on whatever you have selected for display. The size (recording time capacity) of the HDD is chosen at the time of purchase - from 20GB up to 160 GB (there is an elusive reference to 250GB in the written manual, as well).

The EPG is pretty state-of-the-art. There is a "current" listing, next-day (green key) and previous day (blue key) choice. Programme descriptions also appear, not merely the title. By working ahead of current-time listings, the user can select a programme to automatically be selected for viewing (or recorded using the PVR). The menu includes a 'EPG View' listing - a way to check on those scheduled, make changes (such as modify the PVR recording list). Yes, there is teletext as well.

As you might expect, with so many functions, the remote control *could be* intimidating to technophobes; there are 36 buttons with submenus hidden behind some of these. The manual, adequate, is not brilliant and would be a challenge for a proper English language "proof reader" attempting to sort out the original intent of the words from the stated print. There is one feature we found very useful - "Help" gets you to a detailed set of steps describing any function you wish, *on the screen* - in effect you can ignore the printed manual if you wish. And you won't need a language translator with this one.

Summary

This is not the ultimate receiver for *every* user but with limited exceptions it will do most everything the *enthusiast* and serious videophile will wish. HD and 4:2:2 is not included and it lacks the MHEG-5 middleware which the folks at Television New Zealand are requesting for their new FTA service. The complexity is significant and while you can remove it from the box, plug it in, turn it on and see pictures, that would be a mistake if you stop there. It does much more if you will take an hour or two to acquaint yourself with the skills that went into its design.

Just what - or who - is this "FREEVIEW" thing???

Can we depend on these guys to pull it off ?

One of the all-time hilarious film shorts produced by 'The Three Stooges' is known amongst aficionados as '*Niagara Falls*.' In it, Moe has been done-dirty by Larry over a woman and he has followed the culprit across the US tracing him to Niagara Falls (NY).

"*Slowly I turn, inch by inch, foot by foot...*" Moe shouts, relating how he was seeking revenge for being double-dealt by Larry. Only each time Moe tells the story, after uttering "*foot by foot*" some slapstick event occurs and he never finishes the story, or delivers a punch line. It is a classic story without an ending and when he begins reciting it anew the audience weeps tears brought on by uncontrolled laughter. TVNZ (and by insinuation, CanWest) are caught in their own "*Niagara Falls*" - a hilarious story with no ending.

The story begins with the announcement that the NZ government and a "consortium" of telecasters have finally worked out the details of "FREEVIEW," the grand plan to transition all television from existing analogue to the much anticipated digital.

On page 8, here, we calculate that Kiwis may end up spending a billion dollars for digital conversion. Nobody in authority will admit to such a number, of course, because not a single person responsible for the project has run the numbers. For the moment it is a "story without an ending."

We'll begin with the trade name, FREEVIEW. It began as a BBC registered trade name in the UK, and was adopted here in New Zealand by TVNZ. Alas, "adoption" may be a mislabelling.



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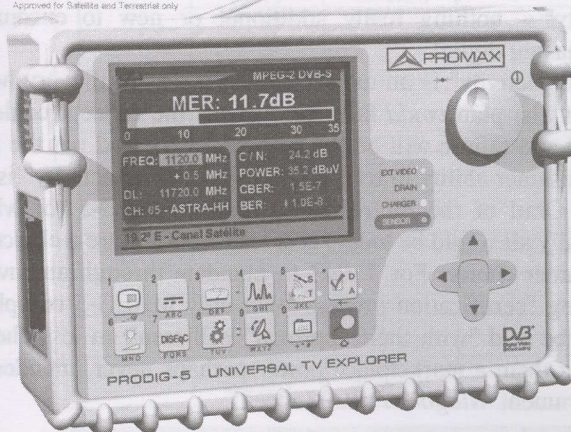
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THE TELEVISION EXPLORER

**The evolution of the field
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PROMAX continues to revolutionise the television field strength meters market. The **PRODIG-5** is a new meter that changes the way users make and understand signal measurements.

With the press of a single button, the **PRODIG-5** can explore the signal you are tuned to and work out all the transmission parameters, analogue or digital!!

And it can display the picture; cable, satellite or terrestrial, analogue or digital*!

All this is a meter that is much smaller and lighter than competitors with similar features.

* No picture for encrypted signals. The service list and PID is displayed.

Trade Mark Number	Title	Current Proprietor (first only)	Classification System -Class	Status
717283	FREEVIEW TELEVISION NEW ZEALAND LIMITED		8 38	120 Abandoned Prior to Registration
750077	Freeview	Peter Esscher	8 38	50 Examination

from <http://www.iponz.govt.nz/pls/web/DBSILLST.List> June 27, 2006.

As the above document illustrates, FREEVIEW as a trade mark was apparently "Abandoned Prior to Registration" by TVNZ. Interpretation? Somehow they elected to not complete the registration process, which means they lost the legal right to the name. "Peter Esscher?" He discovered what appears to be TVNZ carelessness and immediately filed for the trade mark himself.

There is more. Peter Esscher is New Zealand's satellite enigma, and when TVNZ announced (June 15) their plans for FREEVIEW, Esscher immediately began promoting "FREEVIEW (satellite) receivers" on Internet. Personnel at TVNZ quickly reacted, urging (threatening may be more appropriate) Esscher to cease identifying his FTA receivers as "FREEVIEW compatible." Their statement? *"We own the trademarked name,"* which apparently they believed they did. But in an organisation as large as TVNZ, the failure of someone in their legal department to complete the 2005 trademark registration can be understood, if not excused. So, in fact, TVNZ's message to Esscher was in error; they did not own the trademark. In fact, 'Freeview' as a name cannot be trademarked in New Zealand, by Esscher or anyone else.

The abandoned status of FREEVIEW was noticed by others as well; Barrie Clayworth is one of those (he, like Esscher, distributes TV reception hardware in NZ). The two talked, agreed to "challenge TVNZ," as Clayworth also felt that the TVNZ directed move to a mandated set of criteria has been designed to favour a particular group of New Zealand retailers. Clayworth quickly worked out his firm was not "one of the favoured firms" after he was told by a TVNZ exec, *"You can have as much of the digital market as you can earn, but our group will control 80% of the market."* The 'our group' would include a number of prominent Kiwi retailers which Clayworth hypothecates but about which we have no more than his assumptions to list here - so we will not, at this time. *"TVNZ digital, slowly we turn, inch by inch, foot by foot ..."*

The MHEG-5 dilemma

TVNZ, for as long as they have planned for digital, have been focusing on the promise of what digital *might* mean - in the future. And their receiver design requirements (pages 9, 10 here) were written with that "future" in mind.

"Interactive" is the key term. It involves something the industry calls "middleware" which is further technically defined as MHEG-5. This is a system that allows a STB equipped with a telephone socket to communicate through the terrestrial telephone network with a central "polling office." TVNZ believes that digital "interactivity" is their future.

What is interactivity? This is difficult to accurately describe because it has never been done on a wide-scale national basis previously. The UK uses MHEG-5 for terrestrial digital and through it, a consumer punches up responses on the remote control unit (RCU) to items he or she sees on the screen. You might be asked to "vote" on something shown ("Did you like

XXXXX?") but at TVNZ there is a belief, a hypothesis in fact, that when consumers watch a commercial, if "interactivity" gives them a convenient way to actually order something they have just seen advertised, people will do so. Think of wandering down the aisles of 'The Warehouse' without leaving the comfort of your lounge, being able to click-on to a product which is then charged to your on-file credit card and shipped to you.

You might think that to 'test' this hypothesis, TVNZ would have been talking with advertisers for quite some time now, just to sound out their interest in such a system. Or belief that it could actually work - that being totally unproven at this stage.

One might suspect that if this was such a promising area of future commerce, SKY NZ (with 600,000 established telephone equipped customers) would be interested. One might also suspect that a group such as *"As seen on TV"* (an advertising promotional firm) would be interested. Esscher reports neither has an interest in this - "at this time." Maybe TVNZ's plan has to be seen, working, to be believed or accepted. Perhaps.

Barrie Clayworth, meanwhile, feels slighted. His firm has been providing satellite and terrestrial hardware to installers for nearly a decade and he was, he says, *"Not properly consulted by TVNZ when they were putting together their STB specs."* He attributes this to, *"not being in a group of retailers which TVNZ is trying to curry favour with."* What he means is, some retailers spend big money advertising on TVNZ (and TV3) and Clayworth believes the entire distribution and "STB certification system" is being structured to favour these firms.

Numbers will count

TVNZ argues, effectively, that if the market is "flooded with cheap, non-certified STB product, consumers will never have the opportunity to experience 'interactivity'." Parallel? Consider the black and white era transition to colour - had consumers continued to by-in-large continue purchasing only black and whites - well, colour would have died. Consider Australia's switch to DVB-T with the only consumer incentive being a government mandated "better image quality" - nothing really additional or new to encourage purchasing digital.

"Interactivity" is an untested concept - even if every home had it, the plan *could* fail. But at least the concept could be tested and failure will be the fault of TVNZ and not the lack of consumer ability to trial it. At TVNZ, "Interactivity" is the Holy Grail of the future. STBs minus MHEG-5 (of which virtually all would be today) cost less, but they are a choice - a consumer choice. For TVNZ to mandate through an inward looking "certification process" that only MHEG-5 compliant units be sold "with their approval" will result in less choice, giving them a marketplace power perhaps never intended by government. *Niagara Falls?* Indeed!

SatFACTS Pacific/Asian MPEG-2 Digital Watch: 15 July, 2006

Bird	Service	RF/IF &Polarity	# Program Channels	FEC	Msym
Them3/78.5	SkyChAust	3695/1455H	up to 3	3/4	5(.000)
	ANT Greece	3672/1478H	1 TV	3/4	13(.333)
	TARBS ME mux	3640/1510H	12TV, 12 radio	2/3	28(.066)
	Ch Nepal	3626/1524V	1	3/4	15(.556)
	Mahar mux	3600/1550H	11TV, 1 rad	3/4	26(.667)
	RR Sat mux	3551/1600H	8TV, 10 radio	3/4	13(.333)
	TVK Cambodia	3448/1702H	1TV	1/2	6(.312)
	TARBS/Th5	3480/1670H	12 TV+radio	2/3	26(.667)
	Thai Global	3425/1725V	up to 7?	2/3	27(.500)
InSat 2E/83	ETV mux	4005/1145V	6+ TV	3/4	27(.000)
	Hyd Dig 2E	3910/1240V	1	3/4	5(.000)
	Kairali TV	3699/1451V	1	3/4	3(.184)
	Indian mux	3643/1507V	3	3/4	19(.531)
	Sky Bangla	3430/1720V	1TV	3/4	6(.000)
NSS6/95E	Ant Pac (Greek)	11.104H-Australia	1 TV	3/4	2(.800)
As2/100.5E	Guangdong TV	4075/1075H	1TV + radio	3/4	6(.000)
	Euro Bouqt	4000/1150H	5TV, 19 radio	3/4	28(.125)
	SatLink	3960/1190H	3TV	3/4	27(.500)
	Reuters News	3905/1245H	1TV	3/4	4(.000)
	WorldNet	3880/1270H	4+/18radio	1/2	20(.400)
	APTN Asia	3799/1351H	1	3/4	5(.632)
	Reuters/Sing.	3775/1375H	1	3/4	5(.631)
	APTN Asia#2	3705/1445H	1	5/6	4(.166)
	Macau MUX	4148/1002V	5TV	3/4	11(.850)
	Dubai MUX	4020/1430V	4+, radio	3/4	27(.500)
	Russian/Israel	3832/1318V	up to 4 video	3/4	7(.271)
	Trace TV	3792/1358V	1	3/4	2(.400)
	BYU-TV	3767/1383V	1 + 20 audio	1/2	6(.530)
	3-ch miniMUX	3752/1398V	up to 3	3/4	5(.640)
	Saudi TV1	3660/1490V	7+/tests	3/4	27(.500)
Express2/103E	Various-tests	3675/1475R	2	3/4	4(.340)
As3S/105.5E	CETV digital	3680/1470H	1+ TV	3/4	26(.670)
	Zee bouquet	3700/1450V	10TV	3/4	27(.500)
	Ch News Asia	3706/1444H	1TV (+)	3/4	6(.000)
	Azio TV	3716/1434H	1TV (+)	3/4	7(.000)
	BT World	3725/1425V	1TV	3/4	4(.450)
	TVB 8	3729/1421H	1TV	3/4	13(.650)
	Zee Movies	3732/1418V	3TV	3/4	6(.500)
	TV One	3739/1411V	1TV	3/4	2(.8934)
	SAB TV	3743/2407V	1TV	3/4	3(.300)
	Fashion TV	3747/1403V	1TV	3/4	2(.625)
	AAJ-TV	3750/1400V	1TV	3/4	2(.820)
	Arlrang TV	3755/1395V	1	7/8	4(.418)
	Now TV +	3760/1390H	up to 10TV	7/8	26(.000)
	Star TV	3780/1370V	7(+TV)	3/4	28(.100)
	GXTV	3806/1344V	1TV + 3 radio	3/4	4(.420)
	Shaanxi TV	3813/1337V	1TV + 2 radio	3/4	4(.420)
	Anhui TV	3820/1330V	1TV + 2 radio	3/4	4(.420)
	Jiangsu TV	3827/1330V	1TV + 2 radio	3/4	4(.420)
	HLITV	3834/1316V	1TV	3/4	4(.420)
	Star TV	3840/1310H	7(+TV)	7/8	26(.850)
	Star TV	3860/1290V	5(+TV)	3/4	27(.500)
	Arabsat MUX	3880/1270H	10+TV, 14Radio	3/4	27(.500)
	Dragon TV	3886/1264V	1 TV	3/4	4(.800)
	Shandong	3895/1255V	1TV + 6 radio	3/4	6(.813)
	CCTV1	3904/1246V	1TV, 1 radio	7/8	4(.420)
	Jilin TV	3914/1236V	1TV + 2 radio	3/4	4(.420)
	Star TV	3920/1230H	4+ TV	7/8	26(.850)
	CNN	3960/1190H	8TV, 1 radio	3/4	27(.500)
	StarTV	3980/1170V	6+TV	3/4	28(.100)
	Star TV	4000/1150H	8(+TV)	7/8	26(.850)
	Sahara digital	4020/1130V	8TV, 1 radio	3/4	27(.250)
	Hubel TV	4035/1115H	1TV + 2 radio	3/4	4(.420)
	Tianjin TV	4046/1104V	1TV + 2 radio	3/4	5(.950)
	Sichuan TV	4051/1099H	1TV + 1 radio	3/4	4(.420)
	Qinghai TV	4067/1083H	1TV + 2 radio	3/4	4(.420)
	Hunan TV	4082/1068H	1TV + 1 radio	3/4	4(.420)
	Fashion/HK-Asia	4088/1062H	1TV	3/4	2(.626)
	Pakistani TV	4091/1059V	4TV, 1 radio	3/4	9.33
	Sun TV	4095/1055H	1	3/4	5(.554)
	PTV National	4106/1044V	1TV, 1 radio	3/4	3(.333)
	TVB8 Mux	4111/1040H	4 TV	3/4	13(.650)
	Indus News	4115/1035V	1	3/4	3(.331)
	CCTV bqt	4129/1021H	4 TV, 4 radio	3/4	13(.240)
	Zee Bqt #2	4140/1010V	8(+TV)	3/4	27(.500)
	Henan TV	4166/984V	1TV + 8 radio	3/4	4(.420)
	Fujian TV	4180/970V	1TV + 2 radio	3/4	4(.420)
	Jiangxi TV	4187/963V	1TV + 2 radio	3/4	4(.420)
	Liaoning TV	4194/956V	1TV + 2 radio	3/4	4(.420)
Cak1/107.5	Indovision (S-band)	2.535, 2.565, 2.595, 2.625, 2.655	33(+TV)	7/8	20(.000)
TKom/108E	IndoBqt	3460/1690H	up to 6	3/4	28(.000)
C2M/113E	IPI	4185/965V	1	3/4	6(.700)
	Anteve	4144/1006V	1	3/4	6(.510)
	Kabelvision Mux	4080/1070H	7+ TV	7/8	28(.125)
	Indostar	4074/1076V	1	3/4	6(.500)
	Satelindo	3935/1215H	1	3/4	6(.700)
	Bali TV	3926/1224H	1	3/4	4(.208)
	Indo MUX	3880/1270H	3+ TV	7/8	28(.121)

Receivers and Errata

CA (#1, 3); FTA audio #2
Late July 04: room for more (FTA)
CA + 23FTA(A1TV, IRB3, Vision Norge, Pakistan)
New 03/03; FTA
Thai + Indian services; FTA inc. Vibe TV, Sindh TV
3TV, 5radio inc. Hellas TV Greece FTA
FTA
3FTA: TV5, VTV4, ATN Bangla
FTA (reaches SE Australia)
Several ETV now here; wide beam
SCPC, OK E. Aust. wide beam
SCPC, OK E. Aust wide beam
corrections 12/02
New - November 2002
Now CA; was 11.083H
July 04: FTA
FTA TV + radio; Russia,Port,Spain, Italy/Euro Bqr
Real Madrid (V769, A770) English FTA
Was 3923H; sometimes FTA
FTA; multiple audio services V2360, A2320
Sometimes FTA; also 3895Vt
FTA & CA
FTA and CA - NASA reports included
5 chs TV, FTA, some tests
FTA ; Dubai Sports Ch some English, soccer-
Two Israel, two Russian (REN-TV)
new here Dec 2004; Euro-French music videos
Increased coverage; great variety audio chs(03-05)
Sun-TV, Surya TV, KTV (FTA)
FTA MCPC; Yemen, MBC EUROsport tests
Now loaded from 96.5E; svrl below 3900 all RHC
replaces analogue same freq. V33, A32
Now SECA 2 CA (10-04); Radio Aust. Eng. A2011
English + V1160, A1120; 525, 625 versions
Was parallel to 3640Hz analogue (now gone)
Conax CA, all Hindi films
Also reported 3.333, 3/4 October 2005
SAB may no longer here here; moved to NSS-6?
new frequency October 2005
New April 2005; English, urdu
FTA SCPC; New PIDs V3601, A3606 June 2003
CA + FTA; DW, TV5 here now (late 2005)
NDS CA (Pace DVS211, Zenith)
Guangxi TV; was As2
Was As2
Was As2
Was As2
Was As2; HeiLong
NDS CA (Pace DVS211, Zenith)
NDS CA (Pace DVS211, Zenith)
New April 2004: link to Optus B3 Globecast
Shanghai
Apparently Mongolia
Star Sports Asia (+), FTA NTSC; V514, A670 (10-04)
PowVu CA; new SR Apr 29; CNN radio FTA
NDS CA; Star News India FTA VPID 514, APID 648
NDS CA w/ 4(Chinese) FTA
New Sr September 2004
Was As2
new December 2004
Was As2
Was As2
Was As2
New July 2005
new Sr, channels, April 2006
"History Channel" - SCPC, some English
MATV Ch Movies now Irdeto 1
Hindi (+ "Plus"); day parts
moved from 4115
Now SECA 2 CA (10-04); 1 occ. FTA (varies)
Was As2
Was As2
Was As2
Was As2
NDS CA using RCA/Thomson,
Pace IRDs; 2.535 has 2 FTA. Bird now inclined.
also 3586H/17.500, 3496H/19.615
FTA SCPC; NT/NC only
change from 4055V; FTA SCPC
also try 3500H, 27.000, 3/4; strong NZ
FTA (new 06-03); V2201, A2202
test card - only - reported
FTA, may not be active full time
FTA - Sr change 01/03 - erratic

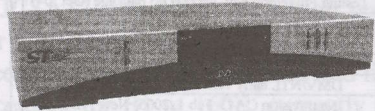
Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
	Brunei/Sing	3733/1417H	1TV	3/4	6(,000)
	SCTV	3726/1424V	1TV	3/4	6(,620)
	RCTI	3473/1677H	2	3/4	8(,000)
As4/122E	CCTV internal	4100/1050V	6	3/4	27(,500)
Jc3/128	Miracle Net	3996/1154V	3 up to 6	5/6	22(,000)
	Asian bqt	3960/1190V	up to 8	7/8	30(,000)
Ap6/134E	Multiple	4140/1010V	up to 8	7/8	27(,500)
T18/138	Tests	3460/1690V	8	3/4	30(,000)
Am3/140	STS+	3731/1419R	1	3/4	3(,200)
Jc2A 154	BYU-TV	3915/1245V	1+ 20 languages	3/4	4(,166) (?)
MeasSs2	Astro Mux	11.602H	up to 17TV	3/4	41(,500)
	VTM MUX	11.522V	3 TV	3/4	9(766)
B3/152	7 Cent. Feed	12.310H	1TV	3/4	5(,100)
	AuroraBiz	12.407V	4 TV, 10 radio	2/3	30(,000)
	UBI/Tests	12.425V	up to 13 TV + radio	3/4	22(,500)
	GloboCast 2	12.525V	13 TV, 8 radio	2/3	30(,000)
	GloboCast (feeds)	12.550-555V	1TV	3/4 & 2/3	6(,110/670)
	GloboCast	12.564V/T13	2+ TV	2/3	30(,000)
	UBI/Tests	12.613H/T14L	11+TV	3/4	22(,500)
	UBI/Tests	12.640H/T14U	11+TV	3/4	22(,500)
	GloboCast 1	12.658V/T7	14TV, 15 radio	2/3	30(,000)
	UBI/Tests	12.674H/T15L	11+TV	3/4	22(,500)
	UBI/Tests	12.701H/T15U	11+TV	3/4	22(,500)
	WA ABC	12.702V	1 TV, 1 radio	7/8	14(,288)
	WA SBS	12.720V	4TV, 2 radio	5/6	12(,600)
	WA GWN/WIN	12.738V	2TV	7/8	14(,295)
C1/156E	Internet tests	12.288V/T1L	no regular TV	1/2 - ?	28(,650) (?)
	Aurora	12.324V/T1U			
	Pay TV	12.365V/T2	11TV, 2 radio	3/4	27(,800)
	Aurora Home	12.407V/T3	5 TV, 13 radio	2/3	30(,000)
	Pay-TV	12.447V/T4	5TV, 4 data	3/4	27(,800)
	Pay TV	12.487V/T5	3+ TV, data	3/4	27(,800)
	Aurora 2	12.527V/T6	7TV, 20 radio	3/4	30(,000)
	Pay-TV	12.567V/T7	10 TV	3/4	27(,800)
	Pay-TV	12.607V/T8	10 TV	3/4	27(,800)
	Pay-TV	12.647V/T9	10 TV	3/4	27(,800)
	Pay-TV	12.692V/T10L	6TV, 27 radio	1/2	28(,650)
	Aurora MUX	12.728V/T10U	4TV, 17 radio	1/2	24(,450)
	Austar	12.305H/T11	6TV, 24 data	3/4	30(,000)
	Pay-TV	12.358H/T12	10 TV	3/4	27(,800)
	Pay-TV	12.398H/T13	10 TV	3/4	27(,800)
	Pay-TV	12.438H/T14	6TV, 3 data	3/4	27(,800)
	Pay-TV	12.478H/T15	10 TV	3/4	27(,800)
	Pay-TV	12.518H/T16	10 TV	3/4	27(,800)
	Pay-TV	12.558H/T17	10 TV	3/4	27(,800)
	Pay-TV	12.598H/T18	10 TV	3/4	27(,800)
	Pay-TV	12.638H/T19	10TV, 30 radio	3/4	27(,800)
	Pay-TV	12.688H/T20	11TV	3/4	27(,800)
B1/160	Occ. feeds	12.380H	1 TV - *	3/4	6(,111)
	Occ. feeds	12.384V	1 TV - *	3/4	6(,111)
	Net 7 service	12.397H	1	3/4	7(,200)
	Imparja mx	12.379H	2TV + 8 radio	3/4	5(,424)
	7 digital feeds	12.397H	1TV	3/4	7(,200)
	Feeds to NZ	12.411V	1 TV	3/4	6(,111)
	SBS Mux	12.420H	3+ TV, 2+ radio	5/6	12(,600)
	TVNZ DTH	12.456V	5+TV	3/4	22(,500)
	TVNZ Tests	12.483V	up to 11TV	3/4	22(,500)
	Sky NZ	12.519/546V	7TV/TV	3/4	22(,500)
	Sky NZ	12.581/608V	6TV/6TV	3/4	22(,500)
	Sky NZ	12.644/671V	9TV	3/4	22(,500)
	ABC western	12.610H	5TV	7/8	14(,3288)
	Sky NZ	12.707/734V	8+TV	3/4	22(,500)
P8/166E	ABS-CBN	12.575H	4+TV, 4+ radio	2/3	13(,845)
	NZ tests	12.642V	up to 8 TV	3/4	28(,060)
	JEDI/TVB	12.686H	11+ TV	3/4	28(,126)
	ABC A-P	4180/970H	2TV, 2 radio	3/4	27(,500)
	Disney Pac	4140/1010H	typ 6 TV	5/6	28(,125)
	Taiwanese MUX	4080/1070H	12+ TV	5/6	30(,000)
	NHK Joho	4060/1090H	7TV, 1 radio	1/2	16(,180)
	FOX Mux	4040/1110V	up to 5TV	7/8	26(,470)
	NET+	4121/1029V	1 TV	3/4	4(,774)
	ESPN USA	4020/1130H	8+TV, data	3/4	26(,470)
	Discovery	3980/1170H	8 typ.	3/4	27(,690)
	CalBqt/Pas8	3940/1210H	up to 3+ FTA	7/8	27(,690)
	CNBC HK	3900/1250H	up to 7TV	3/4	27(,500)
	Filipino MUX	3880/1270V	up to 8TV+radio	5/6	28(,694)
	TaiwanBqt	3860/1290H	12TV + 30 r	5/6	28(,000)
	CCTV Mux	3829/1321H	up to 4+ 1 radio	3/4	13(,240)
	TVBS-N	3836/1314V	1FTA, 4+ CA	3/4	17(,500)
	EMTV PNG	3808/1342V	1 + 2 radio	3/4	5(,632)
	CNNI	3780/1370H	3, up to 5 TV	3/4	25(,000)
	Discovery Asia	3764/1386V	Up to 6 TV	3/4	19(,850)
	MTV	3740/1410H	8	2/3	27(,500)
P2/169E	WA Mux Pv	12.281V	3+ TV, radio	2/3	27(,500)
	Arlang TV	12.401V	1TV	3/4	4(,400)
	ABS-CBN	12.575H	4TV, 2 radio		13(,845)
	Test mux	12.715H	6+ TV	2/3	30(,000)
	TARBS feeds	4090V/1060V	9TV + radio	3/4	21(,000)
	BBC SCPC	3986/1164H	1TV	1/2	5(,700)

Receivers and Errata

FTA ; Singapore 23hrs, Brunei 1 hr; Brunei V1200 was on 4048V; New Caledonia, parts of Australia FTA SCPC; or, 3774H, 6.520, 3/4 (June 06) Irdeto 2; 4060V HDTV CA; also try 4020V PowerVu; some FTA (Ch. 1 & 3) CA & FTA NTSC: Japan, Taiwan (ApStar 6: also 4180V same #s; some analogue also) also try 3660/3540V, Sr 30,000, 3/4; some FTA North beam; also try 3875R, 12.475, 1/2 Strong NZ & Australia; may now be 1/2, 6.525 Aust East beam - **3 FTA** + 14 CA WA only? Skew path, intended Asia Was B1; moved June 2006, concerns B1 failures differs from 12.407 C1; **tune ch FTA; NZ+Au** T11/lower testing late May 2005 NZ + Au, FTA Mcript CA occ feeds, NZ + Au; recently 12.553V AMTV, Healing only FTA svcs now here High performance beam; not NZ, new PIDS 10-05 High performance beam; not NZ, new PIDS 10-05 NZ + Au (Mcript, PowVu capable) High performance beam; not NZ, new PIDS 10-05 High performance beam; not NZ, new PIDS 10-05 ABC WA tests, FTA SBS, radio tests WA FTA Irdeto V2 CA, tests (GWN, WIN) Now on Australia + NZ beam; SCPCs not currently in use Tests; SBS-NDS CA, others FTA when here NZ (90cm) + Australia (**Only C1 svc left on NZ**) Australia NA only (leakage to Norfolk, New Cal) Australia NA only (leakage); 9-Net x 3 widescreen Arrow radio (still here), tone FTA Pay-per-view movies; CA Pay-per-view movies; CA Pay-per-view movies; CA ABC for Foxtel/Austar, previously 12.288V changes September 2005 Austar inter; **Expo FTA** NDS CA + Mcript, CA CA, subscriptions available Australia, Norfolk Sky News active; 'Help x 2' **FTA** CA, subscriptions avail Au, Nrlk; **TVSN FTA** CA, subscriptions available Australia, Norfolk "Home" CA, subscription available Australia, Nrlk CA, subscriptions available Australia, Norfolk CA, subscription available Australia, Norfolk CA, subscription available Australia, Norfolk * - plus 12.451H, 12.460H * - plus 12.293V, 12.402V, 12.411V Full schedule less commercials - links, may be CA PIDS vary; also try 12.360, 12.370 occ. digital feeds; typ fla Often NTSC; USA-Australia-NZ **Also 12.437H, 12.456H** same params; HDTV+WS FTA 7 channels (TVNZ x 4); +Maori_DW, CCTV9 Testing late June; 16.9 added late July NDS CA, subscription available NZ NDS CA, subscription available NZ NDS CA, subscription available NZ also see 12.610, .626, .643, .670, .688, & .706H NDS CA, subscriptions available NZ CA Testing new NZ Ku beam June 2002-Irdeto-2 CA Dateline west; also east PAS2, 3901V PowVu CA Tests - CA service announced PowVu CA & FTA; sub available-changes 05-06 was PAS-2, previously 3992V; **feeds FTA** NET25 + FTA; new PIDS April '03; reload PowVu CA; ch 11 DCP-CCP bootstrap; audio **FTA** PowVu/CA (some audio **FTA**) PowVu CA & FTA (EWIN + CBS + TBN +) NDS CA (6 channels); one test card occ FTA **Myx FTA** V1960, A1920 + radio FTA Mixed **FTA** & CA; STC gone (CA) PowVu FTA, replaces PAS-2 svc CCTV cross pole; new SR 04-06 PowVu CA PowerVu; some audio **FTA** PowerVu; Asian MUX; new parameters Nov '03 **# 8 MTV China FTA V289, A290**; rest CA PowVu CA, WIN, ABC NT, SBS; status unknown Test - may not stay permanently Temp **FTA**; subs Aust 011-800-2270-0722 initially with 6 NTSC colour bars Occ **FTA** (Chile +); BIG power reduction Nov 03 BBC World moved here January 2006

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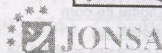
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PROMAX



GEOTRACK

Norsat International Inc.



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Multimedia Home Gateway



ATELLITE STGold ERRESTRIAL

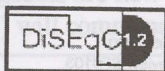
GEOTRACK

Actuator Arms

Light Duty 18" & 24"

Heavy Duty 24" & 36"

DiSEqC H-H



D-ST7 2.3Mtr Heavy Duty
D-ST10 3.0Mtr Heavy Duty



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Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
(PAS2/169E)	Adventists.tv	4040/1010H	1	2/3	5(900)
	Feeds	3868/1182H	1	2/3	6(620)
	Feeds	3939/1211H	2 (typ NTSC)	2/3	6(620)/7(498)
	Cal PowVu	3901/1249H	up to 8	3/4	30(800)
	HK bouquet	3850/1300H	up to 8	2/3	24(900)
	Korean Bgt	3771/1379H	1	3/4	6(510)
AMC23/172E	Various-tests	12.730H	up to 8	3/4	30(000)
1904/174E	IPSTAR	12.619H	1	2/3	25(220)
	Tests-NZ beam	12.646H	1	3/4	22(418)
	RFO Poly	4027/1123R	1TV	3/4	4(566)
1701/180E	TNTV	11.060&11.514V	9	3/4	30(000)
	TVRFO	11.136V, 11.174V	6+TV, 3+ radio	3/4	23(149)
	Canal+Sat	11.610H	16TV, 1 radio	3/4	30(000)
	PBS	12.648HH	16TV possible	3/4	28(066)
	TVNZ/BBC	4186/964RHC	1	3/4	5(632)
	TVNZ	4178/972RHC	1	3/4	5(632)
	AFRTS DTS	4175/975L	3 TV, 3 radio	2/3	3(680)
	TVNZ/Aptn	4170/980RHC	1	3/4	5(632)
	Fiji Sky Pacific	4095/1055LHC	6TV + future radio	3/4	16(505)
	Fiji Sky Pacific	4055/1095LHC	7TV + future radio	3/4	16(505)
	TVNZ/feeds	4052/1098RHC	1	3/4	5(632)
	TVNZ feeds	4044/1106R	1	3/4	5(632)
	NBC to 7 Oz	3960/1190R	1	7/8	6(447)
	TBN Mux	3927/1223R	4TV	2/3	11(394)
	WorldNet	3886/1264R	1TV, 37 radio	3/4	25(000)
	Ioarana	3772/1378L	1	3/4	4(566)
	NASA TV	3854/1296R	1 TV	3/4	2(000)
	TVNZ	3846/1304R	1	3/4	5(632)
	NBA (Barker) Ch	3803/1347R	1	3/4	6(111)
	USA feeds	3749/1401R	4?	?	26(400)
NSS-5/177W	Pacific IP Data	3763/1387R	none-data	3/4	27(500)
	RFO/Tempo	3920/1230R	1	3/4	2(893)
	BYU-TV	4185/965R	1TV, 20+ audio	1/2	6(525)
	Australia Temp.	12.522V	8 SCPC	7/8 & 5/6	14,294 & 12,600
	IPSTAR Tests	12.691V	8 TV	5/6	17(600)

Receivers and Errata
New December 2003; 24/7 "Hope Chs."
FTA (occ sport); also try 3863, Sr6.100
FTA-ty NTSC-occ sport, live Shuttle
PowVu CA + FTA (includes BBC-W 05-05)
was 4148Vt; some FTA
Korean MUX, reload 12-04, new Sr
Testing on NZ/East Australia beam
Tests, late May start; also 12.646H
Testing possible data links; June 2003
SE spot beam; was 4027LHC
east spot; 10TV + r each, vertical pol.
FTA 11.136 Tahitian beam, 11.174 west beam; 12/04
1+ FTA, MediaGd "2"; + 10.975 weaker
Testing Fiji region pay-TV (MDS) package (Oct '04)
DMV/NTL early vers. occ feeds, typ ca
DMV/NTL early vers., occ feeds, typ ca
'DTS Direct to Sailors; audio previously FTA - gone
DMV/NTL early vers. occ feeds, typically ca
Nagravision CA (> Feb 1, 2005) New PIDS
All now (including Fiji 1) CA; 7 Feb, 2005)
DMV/NTL early vers., occ feeds, typ ca
SCPC, mixed CA and FTA feeds
CA, Leitch encoded
January 2006-now 4 channels, new Sr
New PIDS Dec 03 very strong NZ, Pacific
FTA SCPC; East Hemi Beam-Tahiti
24/7 live NASA - West Hemi beam (can be difficult!)
SCPC, mixed CA & FTA, feeds
NBA feeds - probably CA - new Nov 2003
16-QAM (not MPEG-2 compatible)
Data only but useful for dish alignment
Wallis & Futuna Island(s) service
Global beam - requires sizeable dish
Aust beam: 12.522, 538,555,574,604,621,639 & 657
CA Tests - Taiwan TV; data coming?? (NZ beam)

MPEG-2 DVB Receivers: (Data here believed accurate; we assume no responsibility for correctness!)

AV-COMM R3100. FTA, excellent sensitivity (review SF May 1998); new version Sept. '99, AV-COMM P/L, 61-2-9939-4377.

AV-COMM Tiny Tot. FTA, 12Vdc operated, palm sized, low power consumption; review SF#120. Contact # above.

Coship 3188C. Review SF#107. Blind search FTA rcvr; works well. Phoenix Technology Group (www.phoenixsatellite.com.au) (Irdeto 2 as well as FTA versions)

Coship FTA, CA, HDD. Review SF#143, state of art functions, blind search. Phoenix (above), Satlink NZ, fax 64-9-814-9447.

Divitone: "Left-handed" review SF#115; does "code key" entry. Available <http://www.satmax.ws>

eMTech eM-100B (FTA), eM-200B (FTA + Cx2), eM210B (FTA + 2xCi + positioner); KanSat 61-7-5484 6246 (review SF#89)

Fortec Star Lifetime. Two versions, both blind search, code-key programmable, one X 2 Ci. Review SF#119. www.aDigitalLife.com

Homecast (em-150, eM-1150, eM-2150) series of FTA, CA, HDD state of art STBs, review SF#144. Sciteq (www.sciteq.com.au)

Humax ICRI 5400 (Z). Embedded Irdeto + 2 CAM slots; initial units had NTSC glitch, now fixed. Widely available; new software avail 04-04, SF#76.

Humax ICRI 5410 (Z). Adaptable version capable of holding multi-CA systems (SF#98, 99). Widely available; original importer Sciteq (www.sciteq.com.au).

Hyundai-TV/COM. HSS100B/G (Pacific), HSS-100C (China) FTA. Different software versions; 2.26/2.27 good performers, 3.11 and those with Nokia tuners also good; later 5.0 not good.

Hyundai HSS700. FTA, PowerVu, SCPC/MCPC. Review SF March 1999. Kristal Electronics, 61-7-4788-8902.

Hyundai HSS800CI. FTA, Irdeto (with CAM) + other CA systems, PowerVu, NTSC. Kristal Electronics, above; review SF#63.

INNOVIA IDS3088. Review SF#111. Blind search FTA receiver. High quality Ird; available Phoenix Technology Group, and Satmax (<http://www.satmax.ws>).

ID Digital CI-24 Sensor. New August 2003; new lower noise tuner, extra sensitivity; CI Interface slot Irdeto 1 & 2; review SF#109. Sciteq 61-8-9409-6677.

KSF-570 FTA digital receiver, import; KSC-570 adds CI x 2 (no test or user results available). Asoft Limited, 64-4-234-1096

KSC-N550H2 'Premium Dual DVR' digital receiver (no test or user results available). Asoft Limited, 64 4 234 1096

MediaStar D7.5. New (May 00) single chip FTA; review June 2000 SF. MediaStar Comm. Int. 61-2-9618-5777 (www.mediastar.com.au)

MediaStar D10. FTA and Irdeto embedded CA. VG receiver; see review SF#96, August 2002. Contacts immediately above.

MultiChoice (UEC) 660. Essentially same as Australian 660, not grey market contrary to reports. Sciteq tel 61-8-9306-3738

Nokia "d-box" (V1.7X). European, FTA, may only be German language, capable of Dr. Overflow software. SF#95, p. 14.

Nokia 9200/9500. When equipped with proper software, does Aurora, originally did pay-TV services provided software has been "patched" with "Sandra" or similar program. See SF#95, p. 14, SF#96 p. 15. SatWorld 61-3-9773-9270 (www.satworld.com.au)

Pace DGT400/DVR500. Originally Galaxy (Now Foxtel+Austar). Irdeto, some FTA with difficulty (Foxtel Australia 1300-360818). UECs replaced.

Pace "Worldbox" (DSR-620 in NZ). Non-DVB compliant NDS CA including Sky NZ, no FTA; similar "Zenith" version (see SF#115, p. 15).

Phoenix 111, 222, 333 models (no longer produced): Service, backup - Phoenix Technology Group 61 3 9553 3399; www.phoenixsatellite.com.au

Pioneer TS4. Mediaguard CA (no FTA), embedded Msym, FEC, only for Canal+Satellite (AntenneCal ++687-43.81.58)

PowerVu (D9223, 9225, 9234). Non-DVB compliant MPEG-2 unless loaded with software through ESPN Boot Loader (see below). Primarily sold for proprietary CA (NHK, CMT etc). For service only - call Scientific Atlanta 61-2-9452-3388. For revision model D9850, see Scientific Atlanta (below).

PowTek. Blind Search Chinese sourced, field tests rate it highly. Source jason@aDigitalLife.com

Prosat 2102S. FTA SCPC/MCPC, NTSC/PAL, SCART + RCA. Sciteq 61-8-9306-3738.

SatCruiser DSR-101. FTA SCPC/MCPC, PowVu, NTSC/PAL (Skyvision Australia 61-3-9888-7491, Telsat 64-6-356-2749); no longer available.)

SatCruiser DSR-201P. FTA SCPC/MCPC, PowVu, NTSC/PAL, analogue, positioner - (Skyvision - see above); no longer available.

SATWORK ST3618. Blind search FTA receiver. Fast search, problems, especially in "memory-filing" system; review SF#111. Available DMSi at tim@dmsiusa.com.

SATWORK ST3688. Blind search, 3000+ ch memory, multi-format RF modulator; improved version 3618. Review SF#113; available DMSi (above).

Scientific Atlanta D9223, D9234, D9225; Orig. PowerVu, superseded Dec 2003 by D9850. Commercial receiver, available TVO 61-2-9281-4481, John Martin

Strong Technologies SRT2620. SCPC, MCPC FTA, exc sensitivity, ease use, programming. Review SF#91 (ph. below).

Strong SRT 4600. SCPC, MCPC, PowerVu; exc graphics, ease of use, review SF#84. Strong Technologies 61-3-8795-7990.

Strong 4800. SCPC, MCPC, embedded Irdeto+ CAM slots, does code-key with additional software, Aurora. Strong Technologies 61-3-8795-7990.

Strong 4800 II. SCPC, MCPC CAM slots x 2 for Aurora +, Zee, Canal +, code key with additional software. Strong Technologies (above); review SF#103.

Strong 4890. SCPC, MCPC, 30Gb PVR, 2 CAM slots, DiSeqC 1.0, 1.2 (review SF#84), does code key with additional software; Strong Technologies, # above.

UEC Atlas/Titan (1000). New July 2003, replacing DGT400 for Austar. No SCART, L-band loop; also available Rural Electronics 61-2-6361 3636.

UEC642. Designed for Aurora (Irdeto), approved by Optus; w/new software, C-band FTA; faulty P/S. Norsat 61-8-9451-8300.

UEC660. Upgraded UEC642, used by Sky Racing Aust., Foxtel, limited FTA. (Nationwide - 61-7-3252-2947); P/S problems.

UEC700/720. Single chip Irdeto built-in design for Foxtel; unfriendly for FTA. Power supply problems, seldom sold to consumers; propensity to fall off back of trucks.

"X" Digital. When modified with "aftermarket" Internet software, does Aurora and other V-1 CA without card; review SF#119. Strong Technologies (61-3-8795-7990).

Accessories:

Aurora smart cards. MCRYPT (Irdeto V2) cards now available (Jan 2005), Sciteq 61-8-9409-6877.

PowerVu Software Upgrade: PAS-8, 4020/1130Hz, Sr 26.470, 3/4; pgm ch 11 and follow instructions (do not leave early!)

PowerVu (Pacific) repair service: Cable & Sat Svcs, Darius West, 61-2-9792-1421 (Email darius@cases.net.au)

WITH THE OBSERVERS

AT PRESS DEADLINE

PAS-8 3790V, SR 6.510, 3/4 has KBS World and YTN, FTA at this time. ABC uplinks moved from faltering B1 to B3: 12.319, 12.328, 12.335 (all H; 6.980, 3/4). Reminder (see below): UBI promising turn-on of Irdeto V2 "mid-July."

Launch schedules: Sinosat 2, to 134E, with 24Ku transponders designed for China coverage - sometime in late July. JCSAT10, to 128E, with high power Ku plus medium power C-band, sometime in August. Optus D1, Ku only for service to Australia, New Zealand and limited Pacific areas as replacement for B1 at 160E, currently forecast for sometime in September.

NSS 5/177W: "Tempo/RFO for Wallis et Futuna (island group in Pacific) is operating on 3.920RHC, Sr 2.893 and FEC 3/4 FTA, should work with 2m range dishes along full Australian east coast." (Dingo) "Australia beam continues to have ABC x 5 and SBS x 3 (for example 12.522V, Sr14.312) and they will remain here at least until D1 is functional - not trusting B1 to last." (SS, NSW)

Optus B1/160E: This satellite has now gone into 'inclined orbit', a positioning-fuel effort with the tanks dangerously low. Dishes 1m and smaller should not notice any degradation unless they were improperly pointed initially. Larger dishes with tighter beamwidths may find rain outage periods increasing and/or loss of signal, again a function of the original pointing accuracy.

Optus B3/152E: "Seven Central's feed moved from B1 to T9, 12.310H, Sr 5.100, 3/4. However, the NIT remains incorrect (12.720H, 3.689, 3/4). 'Taima Radio' (APID 1284) originates extreme northern Qld, appears in Aurora but is labelled 'Private Service' suggesting use for feeding remote terrestrial radio transmitters. SCPC on T1 (12.294V, Sr 2.000) has changed FEC from 3/4 to 2/3. Globecast, 12.525V, Sr 30.000, 2/3 added a new service (Emmanuel TV, English language Christian from Nigeria), VPID 2665, APID 2625; now 16TV + 11 radio here. Emmanuel stayed only a few days, replaced with Duna TV which June 30 placed an advisory reading, 'Duna TV has moved to 12.525V, 30.000, 2/3; for technical assistance phone: Australia 1300 22 22 66, New Zealand 0800 000885, Email admin@aaacom.com'. My guess is Emmanuel TV will reappear on T5 where there is slightly more available bandwidth. UBI's five-in-use MCPCs continue to run FTA and CA tables still only have MDS CA information. Their test MCPC at 12.452H (Sr 22.500, 3/4) some days has Irdeto V2 CA with a copy of T15/lower and on other days, the data stream is totally empty. On July 3rd UBI's channel 72 posted a new six page advisory claiming STB changeouts are now nearly complete and new encryption (Irdeto V2) will commence "early July 2006." (IF, Qld.)

On www.bobcooper.tv July 15-August 15

Perspective 1: How C-Band TVROs "escaped the law"

Perspective 2: The first "Legal" home dish systems

Perspective 3: The 4.5 metre dish break through And in "Classic Video,"

Scientific Atlanta announces the very first home TVRO systems

... And brand new "C-Band Remembered" pioneering stories as they are now being collected for publishing in a new book available April 2007.

Optus C1/156E: "T2/12.407V, Sr 30.000, 2/3, the 'Tune 156E' label has been changed to 'Info 156E' although there is no substance change in the ten pages of text. (NS, Victoria)

Optus D1/160E: Now planning "September" launch.

Palapa C2/113E: "RCTI, which includes significant English programming, has been on and off FTA on 3.473H, Sr 6.500, 3/4." (William) (Editor's note: Also reported 3.774H, FTA, Sr 6.520, 3/4; this one is 'slippery')

PAS 8/166E: "12.644H continues to have Pan Global testing, up to 9 TV programme channels, Sr26.060, 3/4 FEC with huge signal on 1.2m in northern NZ." (PB) "Have noticed some feeds from TV3 NZ on 12.310V, Sr 5.640, VPID 33, APID 34, PCR 41 - previously seen on NSS5." (Jonathan)

Thaicom 5/78.5E: "(was) scheduled to begin operations here, placing Thaicom 2 and 3, on July 12." (Gerry, NSW)

Soapbox: "We have created a very versatile NTSC or PAL format self-contained MPEG-2 DVB system for use by cable TV or over the air broadcast with as many as 100 TV channels packed into a single six-foot rack. Details are available from www.transparentvideo.net." (N. Gillespie, Cal.) "Network 9's 'Sunday' programme July 2 focused on apparent funding problems at Imparja TV revealing station which once had 6 news camera people is now down to one. Rumours the station might close are unfounded, however." (DM, NSW) (Editor's note: Imparja's feed, B3, continues to function on 12.390H, Sr 5.423, 3/4 but usually with 'hidden PIDs'.) "Telstra is 'fiddling' with charge rates again - a 10

WITH THE OBSERVERS: Reports of new programmers, changes in established programming sources are encouraged from readers throughout the Pacific and Asian regions. Information shared here is an important tool in our ever expanding satellite TV universe. **Photos of yourself, your equipment** or off-air photos taken from your TV screen are welcomed. TV screen photos: If PAL or SECAM, set camera to f3.5-f5 at 1/15th second with ASA 100 film; for NTSC, change shutter speed to 1/30th. Use no flash, set camera on tripod or hold steady. Alternately submit any VHS speed, format reception directly to SatFACTS and we will photograph for you. Deadline for August 15th issue: August 4th by mail or 5PM NZT August 5th if by fax to 64-9-406-1083 or Email skyking@clear.net.nz.

Satellite Expo (2007) to Recognise Satellite Pioneers

Back in 1979, a group of more than 500 gathered in Oklahoma City to be exposed to the latest technology in satellite reception systems. Prior to this first-ever "Satellite Private Terminal Seminar," only cable TV and broadcasters were utilising the early Westar and RCA satellites for transmission of television and radio programming in a field that launched with the telecast of a professional boxing match from the Philippines in September 1976.

What made this gathering unique was its' focus on much smaller (C-band) satellite dishes which enterprising home workshop inventors were creating throughout North America. This was the start of "home dishes" - as small as 4 feet in diameter at a time when cable and broadcast users mistakenly believed a dish must be at least 14 feet in diameter to produce quality reception.

Dozens, soon hundreds of small American and Canadian businesses formed to participate in this brand new industrial revolution and between 1979 and 1985, 'C-band TVRO' became a major new business activity attracting as many as 10,000 to thrice-annual trade shows while the sale and installation of home dishes peaked at around 75,000 per month in 1984.

Satellite Expo 2007 will honour these nearly forgotten "C-band Pioneers" April 19-21 as a special tribute woven into America's largest annual independent satellite trade show. The gathering will attract hundreds of "old-timers" including many of the technology creators who developed the hardware and reception systems, which laid the foundation for today's Ku-band small dish services.

A special "C-Band Pioneers" lounge area featuring videos from the bygone era will be at the gathering spot on the main exhibit floor while "C-Band Remembered" will feature technical sessions from that era led by the very pioneers who made this all happen. A "Pioneer's Dinner" will also be included in the 3-day program.

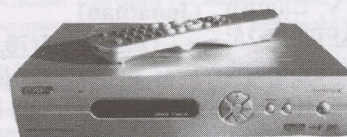
Satellite Expo 2007 is the prominent industry trade show with specialised training courses in addition to a large exhibit floor. Satellite Expo will make a return trip to the fabulous Georgia International Convention Center in Atlanta April 18-21. As a special thank you to our many supporters, free registration is being offered for Satellite Expo 2007 through July 31st at

<http://www.acteva.com/booking.cfm?bevaaid=113284>.

Editor's note: For additional information, www.bobcooper.tv, click on C-Band Reunion

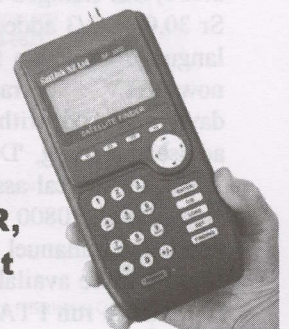
minute call for me to NZ costs A\$1 whereas after 1 August the same length call to a town adjacent to me will cost \$2.." (AI, NSW) "Our Triangle TV is replacing long-serving Sony Flexicart with state of the art Grass Valley K2 with the ability to upgrade to MPEG-4 for both Auckland and Wellington." (Jim Blackman)

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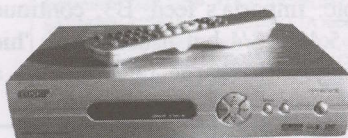


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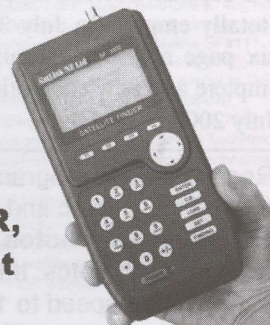


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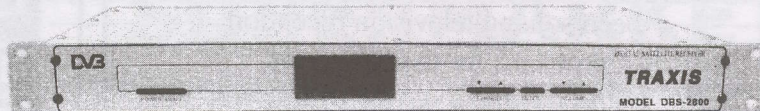


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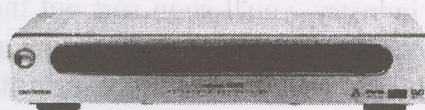


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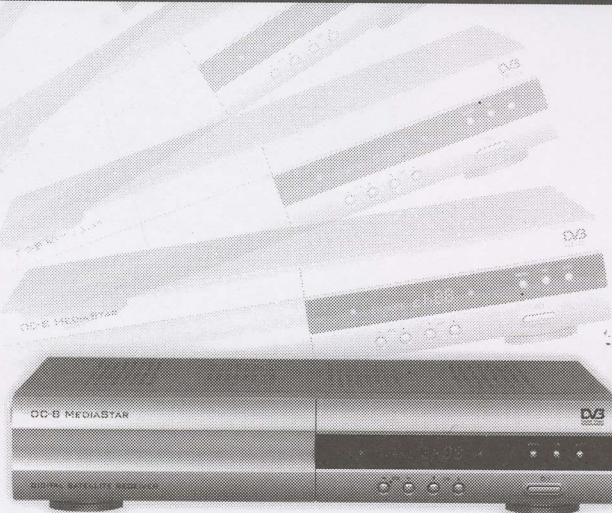
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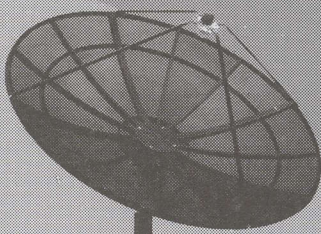
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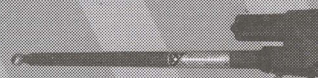


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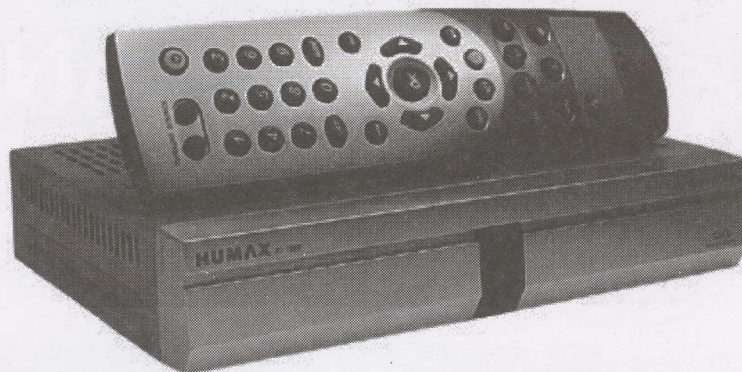
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